## Development Review Application



Type of Review (Please check all that apply):

## $\square$ Annexation (ANX)

Appeal and Review (AP) * Conditional Use (CUP) Design Review (DR) Easement Vacation$\square$ Extraterritorial Ext. of Utilities
Final Plat or Plan (FP)
$\square$ Flood Management AreaHistoric Review
$\triangle$ Subdivision (SUB)
Legislative Plan or Change
Temporary Uses
$\square$ Time Extension*
$\square$ Variance (VAR) Minor Partition (MIP) (Preliminary Plat or Plan) Non-Conforming Lots, Uses \& Structures

Water Resource Area Protection/Single Lot (WAP)
Planned Unit Development (PUD)
Water Resource Area Protection/Wetland (WAP)
1 PreApplication Conference (PA) */**
Willamette \& Tualatin River Greenway (WRG)
Street Vacation
Zone Change
$\square$ Hillside Protection \& Erosion Control
Home Occupation, Pre-Application, Sidewalk Use, Sign Review Permit, and Temporary Sign Permit applications require different or additional application forms, available on the City website or at City Hall.

## Site Location/Address:

23000 AND 23010 BLAND CIRCEL
WEST LINN, OR 97068

## Brief Description of Proposal: 15 LOT RESIDENTIAL SUBDIVISION

# Applicant Name: BLAND CIRCLE, LLC/ATTN: BEN LOONEY 

| Owner Name (required): <br> (please print) <br> Address: | 23010 BLAND CIRCLE |
| :--- | :--- |
| City State Zip: | WEST LINN, OR 97068 |

Phone: (503) 657-0132
Email:

## Consultant Name:EMERIO DESIGN, LLC / ATTN: STEVE MILLER (please print)

Address:
City State Zip:

6445 SW FALLBROOK PL., SUITE 100
BEAVERTON, OR 97008

Phone: (541) 318-7487
Email:
stevem@emeriodesign.com

1. All application fees are non-refundable (excluding deposit). Any overruns to deposit will result in additional billing.
2. The owner/applicant or their representative should be present at all public hearings.
3. A denial or approval may be reversed on appeal. No permit will be in effect until the appeal period has expired.
4. Three (3) complete hard-copy sets (single sided) of application materials must be submitted with this application. One (1) complete set of digital application materials must also be submitted on CD in PDF format. If large sets of plans are required in application please submit only two sets.

* No CD required / ** Only one hard-copy set needed

The undersigned property owners) hereby authorizes the filing of this application, and authorizes on site review by authorized staff. I hereby agree to comply with all code requirements applicable to my application. Acceptance of this application does not infer a complete submittal. All amendments to the Community Development Code and to other regulations adopted after the application is approved shall be enforced where applicable. Approved applications and subsequent development is not vested under the provisions in place at the time of the initial application.


## Development Review Application

| For Office Use Onlv |  |  |
| :---: | :---: | :---: |
| Staff Contact | Project No (s). |  |
| Non-Refundable Fee(s) | Refundable Deposit(s) | TOTAL |

Type of Review (Please check all that apply):


Home Occupation, Pre-Application, Sidewalk Use, Sign Review Permit, and Temporary Sign Permit applications require different or additional application forms, available on the City website or at City Hall.

## Site Location/Address:

Brief Description of Proposal: 15 LOT RESIDENTIAL SUBDIVISION

## Applicant Name: BLAND CIRCLE, LLC/ATTN: BEN LOONEY <br> (please print) <br> Address: <br> City State Zip: <br> 511 MAIN ST., SUITE 101 <br> OREGON CITY, OR 97045

Phone: (541) 404-8825
Email: ben@growthcc.com

Phone: (503) 807-5837
Email:
robertbauer04@gmail.com
Phone: (541) 318-7487
Email: stevem@emeriodesign.com

City State Zip: BEAVERTON, OR 97008

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## Development Review Application

| Staff Contact | For Office Use Only |
| :--- | :--- | :--- |
| Non-Refundable Fee(s) | TOTAL |

Type of Review (Please check all that apply):


Home Occupation, Pre-Application, Sidewalk Use, Sign Review Permit, and Temporary Sign Permit applications require different or additional application forms, available on the City website or at City Hall.
Site Location/Address:
23000 AND 23010 BLAND CIRCEL
WEST LINN, OR 97068

| Assessor's Map No.: 21E35B |
| :--- |
| Tax Lot(s): 201, $\mathbf{4 0 0}$ and 404 |
| Total Land Area: $\mathbf{2 . 8 4}$ Acres |

Brief Description of Proposal: 15 LOT RESIDENTIAL SUBDIVISION

| Applicant Name: | BLAND CIRCLE, LLC/ATTN: BEN LOONEY | Phone: (541) 404-8825 |
| :---: | :---: | :---: |
| Address: | 511 MAIN ST., SUITE 101 | Email: ben@growthcc.com |
| City State Zip: | OREGON CITY, OR 97045 |  |
|  |  | Phone: (503) 657-0132 |
| Address: 23010 BLAND CIRCLE |  | Email: |
| City State Zip: WEST LINN, |  |  |
| Consultant Name:EMERIO DESIGN, LLC / ATTN: STEVE MILLER |  | Phone: (541) 318-7487 |
| Address: | 6445 SW FALLBROOK PL., SUITE 100 | Email: <br> stevem@emeriodesign.com |
| City State Zip: | BEAVERTON, OR 97008 |  |
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## EMERIO Design

CIVIL ENGINEERS \& PLANNERS

DATE: 7-08-2019


CIVIL ENGINEER,

PLANNING \&
SURVEYOR:

Emerio Design, LLC
Attn: Steve Miller
6445 SW Fallbrook PI., Suite 100
Beaverton, OR 97008
(541) 318-7487

E-mail: stevem@emeriodesign.com

REQUEST: Approval of a 15-Lot Subdivision in the R-7 zone.

## SITE

LOCATION: 23000 and 23010 Bland Circle
ZONING: Single-Family Residential Detached and attached (R-7), City of West Linn, Oregon
SITE SIZE: 2.84 Acres
LEGAL DESCRIPTION: Tax Map 2S1E35B, Tax Lots 201, 400, and 404

## LIST OF EXHIBITS:

1 - Detailed Plan Set

2 - Pre-Application Notes
3 - Neighborhood Meeting Notice
4 - Stormwater Management Report
5 - Geotechnical Report
6 - Arborist Report

## WEST LINN APPLICABLE COMMUNITY DEVELOPMENT CODE (CDC) SECTIONS

CDC Chapter 12: (R-7 Zone)
CDC Chapter 48: Access, Egress and Circulation
CDC Chapter 85: Land Division
CDC Chapter 92: Required Improvements

## I. INTRODUCTION

The applicant is applying to subdivide an approximately 2.84 - acre property in a manner that allows the applicant to provide a variety of lot sizes and housing types. A pre-application conference was held with the City to discuss the subdivision of this property on October 4, 2018 by the Applicant.

The subject property is located on the east side of Bland Circle approximately 110 -feet north of Fircrest Drive. The property is located on a hill and the site slopes gently downward to the south/southwest. There are two (2) existing single-family residential homes on the property, one of which will be removed as part of the project. The site is irregular in shape, has undulating topography throughout, and is vegetated with a mix of trees, shrubs, and ornamental landscaping around the existing homes.

All adjacent properties are within the West Linn City limits and are zoned R-7. These properties are developed with single-family residential dwellings.

Brief re-cap of the project:

- 15-Lot Subdivision
- Single-family residential detached dwellings on each lot
- All houses will meet maximum height requirements for the R-7 zone
- Bland Circle will be improved along the site's frontage to City standards.
- All proposed local streets serving the project will be built to city standards, which will include parking on one-side of the street.
- The development will be developed to city standards. No exceptions, variances or adjustments are being requested.
- The minimum lot size in the R-7 zone is 7,000 square feet and all proposed lots meet or exceed the minimum lot size.
- A pre-application conference with the City of West Linn was already held for the project.
- No environmentally sensitive areas have been identified on the property.
- A minimum of $20 \%$ of the significant trees will be preserved with the development of the subdivision.


## II. CONFORMANCE WITH CITY OF WEST LINN CODE APPROVAL CRITERIA

## CHAPTER 12 SINGLE-FAMILY RESIDENTIAL DETACHED AND ATTACHED, R-7

### 12.030 PERMITTED USES

The following uses are permitted outright in this zone.

## 1. Single-family detached residential unit.

RESPONSE: The proposed use is single-family detached residential units, a use permitted outright in the R-7 zone. The applicant's proposal satisfies the requirements of this section.

### 12.070 DIMENSIONAL REQUIREMENTS, USES PERMITTED OUTRIGHT AND USES PERMITTED UNDER PRESCRIBED CONDITIONS

Except as may be otherwise provided by the provisions of this code, the following are the requirements for uses within this zone:
A. The minimum lot size shall be:

1. For a single-family detached unit, 7,000 square feet.
B. The minimum front lot line length or the minimum lot width at the front lot line shall be 35 feet.
C. The average minimum lot width shall be $\mathbf{3 5}$ feet.

RESPONSE: The sizes of the fifteen (15) lots proposed in the subdivision are between 7,045 square feet, and 10,958 square feet, with an average lot size of 7,688 square feet. As such, all fifteen (15) lots meet or exceed the 7,000-square foot minimum lot size. Except for the three (3) proposed "flag lots", all other proposed front lot lines will meet or exceed the 35 -foot minimum front lot line length, as well as the minimum average lot width of 35 feet. The three (3) proposed flag lots meet the minimum frontage requirement for flag lots and will be addressed later in this narrative. Therefore, all fifteen (15) lots comply with the above criteria.
E. The minimum yard dimensions or minimum building setback areas from the lot line shall be:

1. For the front yard, 20 feet, except for steeply sloped lots where the provisions of CDC 41.010 shall apply.
2. For an interior side yard, seven and one-half feet.
3. For a side yard abutting a street, 15 feet.
4. For a rear yard, 20 feet.
F. The maximum building height shall be 35 feet, except for steeply sloped lots in which case the provisions of CDC 41.010 shall apply.
G. The maximum lot coverage shall be 35 percent.
H. The minimum width of an accessway to a lot which does not abut a street or a flag lot shall be 15 feet.
I. The maximum floor area ratio shall be 0.45. Type I and II lands shall not be counted toward lot area when determining allowable floor area ratio, except that a minimum floor area ratio of 0.30 shall be allowed regardless of the classification of lands within the property. That 30 percent shall be based upon the entire property including Type I and II Iands. Existing residences in excess of this standard may be replaced to their prior dimensions when damaged without the requirement that the homeowner obtain a non-conforming structures permit under Chapter 66 CDC.
J. The sidewall provisions of Chapter 43 CDC shall apply.

RESPONSE: No homes are being proposed at this time. All Yard dimensions, building height, lot coverage, floor area ratios and sidewall provisions will be verified at time of building permit submittal.

## CHAPTER 48 - ACCESS, EGRESS AND CIRCULATION

### 48.025 ACCESS CONTROL

A. Purpose. The following access control standards apply to public, industrial, commercial and residential developments including land divisions. Access shall be managed to maintain an adequate level of service and to maintain the functional classification of roadways as required by the West Linn Transportation System Plan.
B. Access control standards.

1. Traffic impact analysis requirements. The City or other agency with access jurisdiction may require a traffic study prepared by a qualified professional to determine access, circulation and other transportation requirements.

RESPONSE: The City has not required a traffic impact analysis due to the small size and low impacts of the proposed development.
2. The City or other agency with access permit jurisdiction may require the closing or consolidation of existing curb cuts or other vehicle access points, recording of reciprocal access easements (i.e., for shared driveways), development of a frontage street, installation of traffic control devices, and/or other mitigation as a condition of granting an access permit, to ensure
the safe and efficient operation of the street and highway system. Access to and from offstreet parking areas shall not permit backing onto a public street.

RESPONSE: Each lot on the property will include a driveway to provide access to/from either the new proposed local street (i.e. Eleanor St.) and/or Bland Circle. Both are public streets either adjacent to the site or internal to the project with a local residential street designation. The City's spacing standards for driveways along residential streets has been maintained for all new driveway access locations. The proposed configuration will create a safe and efficient access configuration for each new driveway.
3. Access options. When vehicle access is required for development (i.e., for off-street parking, delivery, service, drive-through facilities, etc.), access shall be provided by one of the following methods (planned access shall be consistent with adopted public works standards and TSP). These methods are "options" as approved by the City Engineer.
a) Option 1. Access is from an existing or proposed alley or mid-block lane. If a property has access to an alley or lane, direct access to a public street is not permitted.
b) Option 2. Access is from a private street or driveway connected to an adjoining property that has direct access to a public street (i.e., "shared driveway"). A public access easement covering the driveway shall be recorded in this case to assure access to the closest public street for all users of the private street/drive.
c) Option 3. Access is from a public street adjacent to the development lot or parcel. If practicable, the owner/developer may be required to close or consolidate an existing access point as a condition of approving a new access. Street accesses shall comply with the access spacing standards in subsection $(B)(6)$ of this section.

RESPONSE: The Applicant is proposing access to the site via Option 3. The proposed design limits curb cuts for access to the new lots proposed within this development. Each lot will take access to either the proposed new local street (i.e. Eleanor St.) or Bland Circle via individual driveways. The City's spacing standards for driveways along residential streets has been maintained for all new driveway access locations. The proposed configuration will create a safe and efficient access configuration for each new driveway.
4. Subdivisions fronting onto an arterial street. New residential land divisions fronting onto an arterial street shall be required to provide alleys or secondary (local or collector) streets for access to individual lots. When alleys or secondary streets cannot be constructed due to topographic or other physical constraints, access may be provided by consolidating driveways for clusters of two or more lots (e.g., includes flag lots and mid-block lanes).

RESPONSE: The proposed development does not front onto an arterial street. The requirements of this section do not apply.
5. Double-frontage lots. When a lot or parcel has frontage onto two or more streets, access shall be provided first from the street with the lowest classification. For example, access shall be provided from a local street before a collector or arterial street. When a lot or parcel has frontage opposite that of the adjacent lots or parcels, access shall be provided from the street with the lowest classification.

RESPONSE: No double fronted lots will be created as part of this subdivision.
6. Access spacing.
a. The access spacing standards found in the adopted Transportation System Plan (TSP) shall be applicable to all newly established public street intersections and non-traversable medians. Deviation from the access spacing standards may be granted by the City Engineer if conditions are met as described in the access spacing variances section in the adopted TSP.
b. Private drives and other access ways are subject to the requirements of CDC 48.060.

RESPONSE: The Applicant's proposed driveway locations are shown on the site plan (see Sheet 8). The City's access spacing requirements for new driveways onto a residential local street have been maintained.
7. Number of access points. For single-family (detached and attached), two-family, and duplex housing types, one street access point is permitted per lot or parcel, when alley access cannot otherwise be provided; except that two access points may be permitted corner lots (i.e., no more than one access per street), subject to the access spacing standards in subsection (B)(6) of this section. The number of street access points for multiple family, commercial, industrial, and public/institutional developments shall be minimized to protect the function, safety and operation of the street(s) and sidewalk(s) for all users. Shared access may be required, in conformance with subsection (B)(8) of this section, in order to maintain the required access spacing, and minimize the number of access points.

RESPONSE: Except for Lots 5 and 6, which will be flag lots with a shared driveway, the Applicant is proposing only one access point for each single-family lot. Thus, new driveways will be created for 13 lots and two (2) lots will share a driveway.
8. Shared driveways. The number of driveway and private street intersections with public streets shall be minimized by the use of shared driveways with adjoining lots where feasible. The City shall require shared driveways as a condition of land division or site design review, as applicable, for traffic safety and access management purposes in accordance with the following standards:
a. Shared driveways and frontage streets may be required to consolidate access onto a collector or arterial street. When shared driveways or frontage streets are required, they shall be stubbed to adjacent developable parcels to indicate future extension. "Stub" means that a driveway or street temporarily ends at the property line, but may be extended in the future as the adjacent lot or parcel develops. "Developable" means that a lot or parcel is either vacant or it is likely to receive additional development (i.e., due to infill or redevelopment potential).
b. Access easements (i.e., for the benefit of affected properties) shall be recorded for all shared driveways, including pathways, at the time of final plat approval or
as a condition of site development approval.
c. Exception. Shared driveways are not required when existing development patterns or physical constraints (e.g., topography, lot or parcel configuration, and similar conditions) prevent extending the street/driveway in the future.

RESPONSE: The Applicant is proposing only one (1) shared driveway for the development. An access easement will be created for lots 5 and 6 to allow for the shared driveway.
C. Street connectivity and formation of blocks required. In order to promote efficient vehicular and pedestrian circulation throughout the City, land divisions and large site developments shall produce complete blocks bounded by a connecting network of public and/or private streets, in accordance with the following standards:

1. Block length and perimeter. The maximum block length shall not exceed 800 feet or 1,800 feet along an arterial.
2. Street standards. Public and private streets shall also conform to Chapter 92 CDC, Required Improvements, and to any other applicable sections of the West Linn Community Development Code and approved TSP.
3. Exception. Exceptions to the above standards may be granted when blocks are divided by one or more pathway(s), in conformance with the provisions of CDC 85.200(C), Pedestrian and Bicycle Trails, or cases where extreme topographic (e.g., slope, creek, wetlands, etc.) conditions or compelling functional limitations preclude implementation, not just inconveniences or design challenges.

RESPONSE: One new street is being proposed as part of the subdivision and it will be stubbed to the site's northern property boundary for its future extension. The proposed new street will intersect with Bland Circle and provide access to the City's surrounding residential street network.

Existing development patterns and topographic conditions preclude the extension of any new roadways through the site or within close proximity which could logically provide for future connectivity. Furthermore, Figure 12 of the West Linn Transportation System Plan - Recommended Local Street Connectivity Projects - does not identify a new street connection within or adjacent to this site. All street standards will be met as shown in the submitted plan set.

Due to the existing development patter in the surrounding area, as well as the undulating topography, not new blocks are being created as part of this development proposal. Nevertheless, the applicant will be stubbing the new proposed local residential street to the site's northern property boundary, which will allow for it's future extension to facilitate a new block in the neighborhood. Therefore, when the property to the north of the subject property redevelops, there will be an opportunity to establish a new block length of 800 -feet by creating a new street connection with Weatherhill Road.

### 48.030 MINIMUM VEHICULAR REQUIREMENTS FOR RESIDENTIAL USES

A. Direct individual access from single-family dwellings and duplex lots to an arterial street, as designated in the transportation element of the Comprehensive Plan, is prohibited for lots or
parcels created after the effective date of this code where an alternate access is either available or is expected to be available by imminent development application. Evidence of alternate or future access may include temporary cul-de-sacs, dedications or stubouts on adjacent lots or parcels, or tentative street layout plans submitted at one time by adjacent property owner/developer or by the owner/developer, or previous owner/developer, of the property in question.

In the event that alternate access is not available as determined by the Planning Director and City Engineer, access may be permitted after review of the following criteria:

1. Topography.
2. Traffic volume to be generated by development (i.e., trips per day).
3. Traffic volume presently carried by the street to be accessed.
4. Projected traffic volumes.
5. Safety considerations such as line of sight, number of accidents at that location, emergency vehicle access, and ability of vehicles to exit the site without backing into traffic.
6. The ability to consolidate access through the use of a joint driveway.
7. Additional review and access permits may be required by State or County agencies.

RESPONSE: The Applicant is not proposing new access to any arterials; therefore, this subsection does not apply.
B. When any portion of any house is less than 150 feet from the adjacent right-of-way, access to the home is as follows:

1. One single-family residence, including residences with an accessory dwelling unit as defined in CDC 02.030, shall provide 10 feet of unobstructed horizontal clearance. Dualtrack or other driveway designs that minimize the total area of impervious driveway surface are encouraged.
2. Two to four single-family residential homes equals a 14- to 20 -foot-wide paved or all weather surface. Width shall depend upon adequacy of line of sight and number of homes.
3. Maximum driveway grade shall be 15 percent. The 15 percent shall be measured along the centerline of the driveway only. Variations require approval of a Class II variance by the Planning Commission pursuant to Chapter 75 CDC. Regardless, the last 18 feet in front of the garage shall be under 12 percent grade as measured along the centerline of the driveway only. Grades elsewhere along the driveway shall not apply.
4. The driveway shall include a minimum of 20 feet in length between the garage door and the back of sidewalk, or, if no sidewalk is proposed, to the paved portion of the right-ofway.
C. When any portion of one or more homes is more than 150 feet from the adjacent right-of-way, the provisions of subsection B of this section shall apply in addition to the following provisions.
5. A turnaround may be required as prescribed by the Fire Chief.
6. Minimum vertical clearance for the driveway shall be 13 feet, six inches.
7. A minimum centerline turning radius of 45 feet is required unless waived by the Fire Chief.
8. There shall be sufficient horizontal clearance on either side of the driveway so that the total horizontal clearance is $\mathbf{2 0}$ feet.
D. Access to five or more single-family homes shall be by a street built to full construction code standards. All streets shall be public. This full street provision may only be waived by variance.
E. Access and/or service drives for multi-family dwellings shall be fully improved with hard surface pavement:
9. With a minimum of 24-foot width when accommodating two-way traffic; or
10. With a minimum of 15-foot width when accommodating one-way traffic. Horizontal clearance shall be two and one-half feet wide on either side of the driveway.
11. Minimum vertical clearance of 13 feet, six inches.
12. Appropriate turnaround facilities per Fire Chief's standards for emergency vehicles when the drive is over 150 feet long. Fire Department turnaround areas shall not exceed seven percent grade unless waived by the Fire Chief.
13. The grade shall not exceed 10 percent on average, with a maximum of 15 percent.
14. A minimum centerline turning radius of 45 feet for the curve.
F. Where on-site maneuvering and/or access drives are necessary to accommodate required parking, in no case shall said maneuvering and/or access drives be less than that required in Chapters 46 and 48 CDC.
G. The number of driveways or curb cuts shall be minimized on arterials or collectors. Consolidation or joint use of existing driveways shall be required when feasible.
H. In order to facilitate through traffic and improve neighborhood connections, it may be necessary to construct a public street through a multi-family site.
I. Gated accessways to residential development other than a single-family home are prohibited.

RESPONSE: Access to each lot will be provided to/from either Bland Circle or the new proposed street (i.e. Eleanor St.), which are both local residential streets, and will meet the minimum vehicular requirements of this subsection.
48.060 WIDTH AND LOCATION OF CURB CUTS AND ACCESS SEPARATION REQUIREMENTS
A. Minimum curb cut width shall be 16 feet.
B. Maximum curb cut width shall be 36 feet, except along Highway 43 in which case the maximum curb cut shall be 40 feet. For emergency service providers, including fire stations, the maximum shall be 50 feet.
C. No curb cuts shall be allowed any closer to an intersecting street right-of-way line than the following:

1. On an arterial when intersected by another arterial, 150 feet.
2. On an arterial when intersected by a collector, 100 feet.
3. On an arterial when intersected by a local street, 100 feet.
4. On a collector when intersecting an arterial street, 100 feet.
5. On a collector when intersected by another collector or local street, 35 feet.
6. On a local street when intersecting any other street, 35 feet.
D. There shall be a minimum distance between any two adjacent curb cuts on the same side of a public street, except for one-way entrances and exits, as follows:
7. On an arterial street, 150 feet.
8. On a collector street, 75 feet.
9. Between any two curb cuts on the same lot or parcel on a local street, 30 feet.
E. A rolled curb may be installed in lieu of curb cuts and access separation requirements.
F. Curb cuts shall be kept to the minimum, particularly on Highway 43. Consolidation of driveways is preferred. The standard on Highway 43 is one curb cut per business if consolidation of driveways is not possible.
G. Adequate line of sight pursuant to engineering standards should be afforded at each driveway or accessway.

RESPONSE: All streets serving the subdivision are local residential streets. All proposed curb cuts will meet the spacing requirements of this section and will be confirmed during the construction plan review prior to commencing construction of the subdivision.

## CHAPTER 85 GENERAL PROVISIONS

### 85.170 SUPPLEMENTAL SUBMITTAL REQUIREMENTS FOR TENTATIVE SUBDIVISION OR PARTITION PLAN

B. Transportation.

1. Centerline profiles with extensions shall be provided beyond the limits of the proposed subdivision to the point where grades meet, showing the finished grade of streets and the nature and extent of street construction. Where street connections are not proposed within or beyond the limits of the proposed subdivision on blocks exceeding 330 feet, or for cul-de-sacs, the tentative plat or partition shall indicate the location of easements that provide connectivity for bicycle and pedestrian use to accessible public rights-of-way.

## 2. Traffic Impact Analysis (TIA).

a. Purpose. The purpose of this section of the code is to implement Section 660-0120045(2)(e) of the State Transportation Planning Rule that requires the City to adopt a process to apply conditions to development proposals in order to minimize adverse impacts to and protect transportation facilities. This section establishes the standards for when a proposal must be reviewed for potential traffic impacts; when a Traffic Impact Analysis must be submitted with a development application in order to determine whether conditions are needed to minimize impacts to and protect transportation facilities; what must be in a Traffic Impact Study; and who is qualified to prepare the study.
b. Typical average daily trips. The latest edition of the Trip Generation manual, published by the Institute of Transportation Engineers (ITE) shall be used as the standards by which to gauge average daily vehicle trips.
c. Traffic impact analysis requirements.

1) Preparation. A Traffic Impact Analysis shall be prepared by a professional engineer qualified under OAR 734-051-0040. The City shall commission the traffic analysis and it will be paid for by the applicant.
2) Transportation Planning Rule compliance. See CDC 105.050(D), Transportation Planning Rule Compliance.
3) Pre-application conference. The applicant will meet with West Linn Public Works prior to submitting an application that requires a traffic impact application. This meeting will determine the required elements of the TIA and the level of analysis expected.

RESPONSE: The Applicant is not proposing a change in zoning or a plan amendment designation as a part of this land use application, therefore a Traffic Impact Analysis (TIA) is not required per this subsection.
C. Grading.

1. If areas are to be graded, a plan showing the location of cuts, fill, and retaining walls, and information on the character of soils shall be provided. The grading plan shall show proposed and existing contours at intervals per CDC 85.160(E)(2).
2. The grading plan shall demonstrate that the proposed grading to accommodate roadway standards and create appropriate building sites is the minimum amount necessary.
3. The grading plan must identify proposed building sites and include tables and maps identifying acreage, location and type of development constraints due to site characteristics such as slope, drainage and geologic hazards. For Type I, II, and III lands (refer to definitions in Chapter 02 CDC), the applicant must provide a geologic report, with text, figures and attachments as needed to meet the industry standard of practice, prepared by a certified engineering geologist and/or a geotechnical professional engineer, that includes:
a. Site characteristics, geologic descriptions and a summary of the site investigation conducted;
b. Assessment of engineering geological conditions and factors;
c. Review of the City of West Linn's Natural Hazard Mitigation Plan and applicability to the site; and
d. Conclusions and recommendations focused on geologic constraints for the proposed land use or development activity, limitations and potential risks of development, recommendations for mitigation approaches and additional work needed at future development stages including further testing and monitoring.

RESPONSE: As part of the application materials, the applicant has provided a grading and erosion control plan (see Sheet 7) showing the locations of cuts, fills, and retaining walls. The Applicant has also provided a detailed Geotechnical report that provides information on the character of the soils. Together, these documents demonstrate that the proposed grading plan to accommodate roadway standards and create appropriate building sites is the minimum amount necessary given the sites topographic and soil conditions. The Applicant's proposal satisfies the above criteria and will be further reviewed with the civil plans prior to commencing any construction.

## D. Water.

1. A plan for domestic potable water supply lines and related water service facilities, such as reservoirs, etc., shall be prepared by a licensed engineer consistent with the adopted Comprehensive Water System Plan and most recently adopted updates and amendments.
2. Location and sizing of the water lines within the development and off-site extensions. Show on-site water line extensions in street stubouts to the edge of the site, or as needed to complete a loop in the system.
3. Adequate looping system of water lines to enhance water quality.
4. For all non-single-family developments, calculate fire flow demand of the site and demonstrate to the Fire Chief. Demonstrate to the City Engineer how the system can meet the demand.

RESPONSE: A utility plan has been submitted by the Applicant as part of the overall application materials. The utility plan shows the location and sizing of the water lines, as well as on-site water line extensions in street stubouts to the edge of the site, or as needed to complete a loop in the system. All proposed water improvements are included on the utility plan (see Sheet 8) of the land use application.
E. Sewer.

1. A plan prepared by a licensed engineer shall show how the proposal is consistent with the Sanitary Sewer Master Plan and subsequent updates and amendments. Agreement with that plan must demonstrate how the sanitary sewer proposal will be accomplished and how it is efficient. The sewer system must be in the correct zone.
2. Sanitary sewer information will include plan view of the sanitary sewer lines, including manhole locations and depths. Show how each lot or parcel would be sewered.
3. Sanitary sewer lines shall be located in the public right-of-way, particularly the street, unless the applicant can demonstrate why the alternative location is necessary and meets accepted engineering standards.
4. Sanitary sewer line should be at a depth that can facilitate connection with downsystem properties in an efficient manner.
5. The sanitary sewer line should be designed to minimize the amount of lineal feet in the system.
6. The sanitary sewer line shall minimize disturbance of natural areas and, in those cases where that is unavoidable, disturbance shall be mitigated pursuant to the appropriate chapters (e.g., Chapter 32 CDC, Water Resource Area Protection).
7. Sanitary sewer shall be extended or stubbed out to the next developable subdivision or a point in the street that allows for reasonable connection with adjacent or nearby properties.
8. The sanitary sewer system shall be built pursuant to Department of Environmental Quality (DEQ), City, and Tri-City Service District sewer standards. This report should be prepared by a licensed engineer, and the applicant must be able to demonstrate the
ability to satisfy these submittal requirements or standards at the pre-construction phase.

RESPONSE: A utility plan has been submitted by the Applicant as part of the overall application materials. The utility plan shows the location and sizing of the sewer lines. Sanitary sewer will be extended or stubbed out to the next developable subdivision or to a point in the street that allows for reasonable connection with adjacent or nearby properties. The proposed sanitary sewer lines will be located to minimize disturbance to any potential natural areas; however, in those cases where that is unavoidable, disturbances will be kept to a minimum.

All proposed sewer improvements will be built pursuant to DEQ, City, and Tri-City Service District standards, and those improvements are included on the utility plan (see Sheet 8) of the land use application.

## F. Storm. A proposal shall be submitted for storm drainage and flood control including profiles of proposed drainageways with reference to the most recently adopted Storm Drainage Master Plan.

RESPONSE: A utility plan has been submitted by the Applicant as part of the overall application materials. The utility plan shows the location and sizing of the stormwater lines. The public stormwater plan will include a water quality facility (i.e. pond) located at the southwestern corner of the site. Individual LIDA planters will also be located on each lot for the treatment/detention of the future homes according to City requirements. All proposed storm drainage improvements are included on the utility plan (see Sheet 8) of the land use application.

### 85.180 REDIVISION PLAN REQUIREMENT

A redivision plan shall be required for a partition or subdivision, where the property could be developed at a higher density, under existing/proposed zoning, if all services were available and adequate to serve the use.

RESPONSE: The property is being developed at the highest density allowed under applicable zoning, therefore a redivision plan is not required.

### 85.200 APPROVAL CRITERIA

No tentative subdivision or partition plan shall be approved unless adequate public facilities will be available to provide service to the partition or subdivision area prior to final plat approval and the Planning Commission or Planning Director, as applicable, finds that the following standards have been satisfied, or can be satisfied by condition of approval.
A. Streets.

1. General. The location, width and grade of streets shall be considered in their relation to existing and planned streets, to the generalized or reasonable layout of streets on adjacent undeveloped lots or parcels, to topographical conditions, to public convenience and safety, to accommodate various types of transportation (automobile, bus, pedestrian, bicycle), and to the proposed use of land to be served by the streets. The functional class of
a street aids in defining the primary function and associated design standards for the facility. The hierarchy of the facilities within the network in regard to the type of traffic served (through or local trips), balance of function (providing access and/or capacity), and the level of use (generally measured in vehicles per day) are generally dictated by the functional class. The street system shall assure an adequate traffic or circulation system with intersection angles, grades, tangents, and curves appropriate for the traffic to be carried. Streets should provide for the continuation, or the appropriate projection, of existing principal streets in surrounding areas and should not impede or adversely affect development of adjoining lands or access thereto.

To accomplish this, the emphasis should be upon a connected continuous pattern of local, collector, and arterial streets rather than discontinuous curvilinear streets and cul-de-sacs. Deviation from this pattern of connected streets should only be permitted in cases of extreme topographical challenges including excessive slopes ( 35 percent-plus), hazard areas, steep drainageways, wetlands, etc. In such cases, deviations may be allowed but the connected continuous pattern must be reestablished once the topographic challenge is passed. Streets should be oriented with consideration of the sun, as site conditions allow, so that over 50 percent of the front building lines of homes are oriented within 30 degrees of an east-west axis.

Internal streets are the responsibility of the developer. All streets bordering the development site are to be developed by the developer with, typically, half-street improvements or to City standards prescribed by the City Engineer. Additional travel lanes may be required to be consistent with adjacent road widths or to be consistent with the adopted Transportation System Plan (TSP) and any adopted updated plans.

An applicant may submit a written request for a waiver of abutting street improvements if the TSP prohibits the street improvement for which the waiver is requested. Those areas with numerous (particularly contiguous) under-developed or undeveloped tracts will be required to install street improvements. When an applicant requests a waiver of street improvements and the waiver is granted, the applicant shall pay an in-lieu fee equal to the estimated cost, accepted by the City Engineer, of the otherwise required street improvements. As a basis for this determination, the City Engineer shall consider the cost of similar improvements in recent development projects and may require up to three estimates from the applicant. The amount of the fee shall be established prior to the Planning Commission's decision on the associated application. The in-lieu fee shall be used for in kind or related improvements.

Streets shall also be laid out to avoid and protect tree clusters and significant trees, but not to the extent that it would compromise connectivity requirements per this subsection (A)(1), or bring the density below 70 percent of the maximum density for the developable net area. The developable net area is calculated by taking the total site acreage and deducting Type I and II lands; then up to 20 percent of the remaining land may be excluded as necessary for the purpose of protecting significant tree clusters or stands as defined in CDC 55.100(B)(2).

RESPONSE: This site is located along Bland Circle approximately 120 feet north of Fircrest Drive. All streets, whether existing or proposed, are designated as local streets. The development of this site will
not affect the connectivity of any existing or proposed streets. Aside from the extension of the proposed new local residential street through the site, Figure 12 of the West Linn Transportation System Plan Recommended Local Street Connectivity Projects - does not identify a new street connection within or adjacent to this site.
2. Right-of-way widths shall depend upon which classification of street is proposed. The right-of-way widths are established in the adopted TSP.

RESPONSE: The site abuts Bland Circle along the southern property boundary. The Applicant is proposing a new local residential street to be extended through the site and stubbed to the site's northern property boundary. Both streets are designated as local streets. As part of the proposed development, the Applicant will be dedicating 7-feet of right-of-way for Bland Circle street to make necessary improvements along Bland Circle. The new proposed local residential street will be equipped with a 52-foot right-of-way. There proposed local street will have two (2) travel lanes, planter strips, sidewalks on both sides located within the 52-foot right-of-way. Right-of-way for both streets meet the width requirements as determined by their functional classifications.
3. Street widths. Street widths shall depend upon which classification of street is proposed. The classifications and required cross sections are established in the adopted TSP. The following table identifies appropriate street width (curb to curb) in feet for various street classifications. The desirable width shall be required unless the applicant or his or her engineer can demonstrate that site conditions, topography, or site design require the reduced minimum width. For local streets, a 12-foot travel lane may only be used as a shared local street when the available right of-way is too narrow to accommodate bike lanes and sidewalks.

RESPONSE: One (1) new street or road is proposed with this land use application. As noted above, new proposed local residential street will be equipped with a 52-foot right-of-way. There proposed local street will have two (2) travel lanes, planter strips, sidewalks on both sides located within the 52-foot right-of-way.

Bland Circle is an existing street and it will continue to meet street width requirements for residential local streets with the dedication of 7-feet as part of this development proposal. Right-of-way for both streets meet the width requirements as determined by their functional classifications.
4. The decision-making body shall consider the City Engineer's recommendations on the desired right-of-way width, pavement width and street geometry of the various street types within the subdivision after consideration by the City Engineer of the following criteria:

## a. The type of road as set forth in the Transportation Master Plan.

b. The anticipated traffic generation.
c. On-street parking requirements.
d. Sidewalk and bikeway requirements.
e. Requirements for placement of utilities.
f. Street lighting.
g. Drainage and slope impacts.
h. Street trees.
i. Planting and landscape areas.
j. Existing and future driveway grades
k. Street geometry.
I. Street furniture needs, hydrants.

RESPONSE: Aside from the 7-foot right-of-way dedication along Bland Circle and the associated improvements (i.e. sidewalk, planter strip and paving), the pre-application conference notes do not identify the need for any further improvements along Bland Circle. Eleanor Street has been designed to comply with all City standards and specification for a local residential street.
5. Additionally, when determining appropriate street width, the decision-making body shall consider the following criteria:
a. When a local street is the only street serving a residential area and is expected to carry more than the normal local street traffic load, the designs with two travel and one parking lane are appropriate.
b. Streets intended to serve as signed but unstriped bike routes should have the travel lane widened by two feet.
c. Collectors should have two travel lanes and may accommodate some parking. Bike routes are appropriate.
d. Arterials should have two travel lanes. On-street parking is not allowed unless part of a Street Master Plan. Bike lanes are required as directed by the Parks Master Plan and Transportation Master Plan.

RESPONSE: The proposed development will result in fifteen (15) new homes taking access to the existing surrounding transportation system. No arterial streets are adjacent to this proposal.
6. Reserve strips. Reserve strips or street plugs controlling the access to streets are not permitted unless owned by the City.

RESPONSE: The Applicant does not propose reserve strips or street plugs with this application. All rights-of-way will be dedicated to the edge of the adjoining properties.
7. Alignment. All streets other than local streets or cul-de-sacs, as far as practical, shall be in alignment with existing streets by continuations of the centerlines thereof. The staggering of street alignments resulting in " $T$ " intersections shall, wherever practical, leave a minimum distance of 200 feet between the centerlines of streets having approximately the same direction and otherwise shall not be less than 100 feet.

RESPONSE: Except for extending the new proposed local residential street (i.e. Eleanor St.) through the site and stubbing it out at the northern property boundary, no other new streets or roads are proposed as part of this application. The centerline of the new proposed street will be in excess of 200-feet from the centerline of Fircrest Dr.
8. Future extension of streets. Where necessary to give access to or permit a satisfactory future subdivision of adjoining land, streets shall be extended to the boundary of the subdivision and the resulting dead-end streets may be approved without turnarounds. (Temporary turnarounds built to Fire Department standards are required when the deadend street is over 100 feet long.)

RESPONSE: As noted above, the proposed new local street (i.e. Eleanor St.) will be extended through the site as part of the development and stubbed to the sites northern property boundary to permit the satisfactory subdivision of adjoining land. The Applicant's proposal satisfies this criterion.
9. Intersection angles. Streets shall be laid out to intersect angles as near to right angles as practical, except where topography requires lesser angles, but in no case less than 60 degrees unless a special intersection design is approved. Intersections which are not at right angles shall have minimum corner radii of 15 feet along right-of-way lines which form acute angles. Right-of-way lines at intersections with arterial streets shall have minimum curb radii of not less than 35 feet. Other street intersections shall have curb radii of not less than 25 feet. All radii shall maintain a uniform width between the roadway and the right-of-way lines. The intersection of more than two streets at any one point will not be allowed unless no alternative design exists.

RESPONSE: One (1) new intersection is being proposed as part of the Applicant's development proposal. The intersection will be with Bland Circle and the intersection angles will as near to right angles as practical given the existing conditions and topography. The Applicant's proposal satisfies the above criterion.
10. Additional right-of-way for existing streets. Wherever existing street rights-of-way adjacent to or within a tract are of inadequate widths based upon the standards of this chapter, additional right-of-way shall be provided at the time of subdivision or partition.

RESPONSE: The applicant will be dedicating 7-feet of right-of-way for Bland Circle along the sites frontage.
11. Cul-de-sacs.
a. New cul-de-sacs and other closed-end streets (not including stub streets intended to be connected) on sites containing less than five acres, or sites accommodating uses other
than residential or mixed use development, are not allowed unless the applicant demonstrates that there is no feasible alternative due to:

1) Physical constraints (e.g., existing development, the size or shape of the site, steep topography, or a fish bearing stream or wetland protected by Chapter 32 CDC), or
2) Existing easements or leases.
b. New cul-de-sacs and other closed-end streets, consistent with subsection (A)(11)(a) of this section, shall not exceed 200 feet in length or serve more than 25 dwelling units unless the design complies with all adopted Tualatin Valley Fire and Rescue (TVFR) access standards and adequately provides for anticipated traffic, consistent with the Transportation System Plan (TSP).
c. New cul-de-sacs and other closed-end streets (not including stub streets intended to be connected) on sites containing five acres or more that are proposed to accommodate residential or mixed use development are prohibited unless barriers (e.g., existing development, steep topography, or a fish bearing stream or wetland protected by Chapter 32 CDC, or easements, leases or covenants established prior to May 1, 1995) prevent street extensions. In that case, the street shall not exceed 200 feet in length or serve more than 25 dwelling units, and its design shall comply with all adopted TVFR access standards and adequately provide for anticipated traffic, consistent with the TSP.
d. Applicants for a proposed subdivision, partition or a multifamily, commercial or industrial development accessed by an existing cul-de-sac/closed-end street shall demonstrate that the proposal is consistent with all applicable traffic standards and TVFR access standards.
e. All cul-de-sacs and other closed-end streets shall include direct pedestrian and bicycle accessways from the terminus of the street to an adjacent street or pedestrian and bicycle accessways unless the applicant demonstrates that such connections are precluded by physical constraints or that necessary easements cannot be obtained at a reasonable cost.
f. All cul-de-sacs/closed-end streets shall terminate with a turnaround built to one of the following specifications (measurements are for the traveled way and do not include planter strips or sidewalks).

RESPONSE: No cul-de-sacs are proposed as part of this land use application.
12. Street names. No street names shall be used which will duplicate or be confused with the names of existing streets within the City. Street names that involve difficult or unusual spellings are discouraged. Street names shall be subject to the approval of the Planning Commission or Planning Director, as applicable. Continuations of existing streets shall have the name of the existing street. Streets, drives, avenues, ways, boulevards, and lanes shall describe through streets. Place and court shall describe cul-de-sacs. Crescent, terrace, and circle shall describe loop or arcing roads.

RESPONSE: One new street is being proposed as part of this land use application. The Applicant is proposing to name the new street "Eleanor Street". Based on the Applicant's research of the City's existing street names, it does not appear that the name "Eleanor" would duplicate or be confused with names of existing streets within the City. Also, the proposed street name does not involve difficult of unusual spellings.
13. Grades and curves. Grades and horizontal/vertical curves shall meet the West Linn Public Works Design Standards.

RESPONSE: Any grades and/or horizontal/vertical curves will be designed to meet West Linn Public Works Design Standards.
14. Access to local streets. Intersection of a local residential street with an arterial street may be prohibited by the decision-making authority if suitable alternatives exist for providing interconnection of proposed local residential streets with other local streets. Where a subdivision or partition abuts or contains an existing or proposed major arterial street, the decision-making authority may require marginal access streets, reverse-frontage lots with suitable depth, visual barriers, noise barriers, berms, no-access reservations alongside and rear property lines, and/or other measures necessary for adequate protection of residential properties from incompatible land uses, and to ensure separation of through traffic and local traffic.

RESPONSE: The property does not abut nor contain an existing or proposed arterial street.
15. Alleys. Alleys shall be provided in commercial and industrial districts unless other permanent provisions for access to off-street parking and loading facilities are made as approved by the decision-making authority. While alley intersections and sharp changes in alignment should be avoided, the corners of necessary alley intersections shall have radii of not less than 10 feet. Alleys may be provided in residential subdivisions or multi-family projects. The decision to locate alleys shall consider the relationship and impact of the alley to adjacent land uses. In determining whether it is appropriate to require alleys in a subdivision or partition, the following factors and design criteria should be considered:
a. The alley shall be self-contained within the subdivision. The alley shall not abut undeveloped lots or parcels which are not part of the project proposal. The alley will not stub out to abutting undeveloped parcels which are not part of the project proposal.
b. The alley will be designed to allow unobstructed and easy surveillance by residents and police.
c. The alley should be illuminated. Lighting shall meet the West Linn Public Works Design Standards.
d. The alley should be a semi-private space where strangers are tacitly discouraged.
e. Speed bumps may be installed in sufficient number to provide a safer environment for children at play and to discourage through or speeding traffic.
f. Alleys should be a minimum of 14 feet wide, paved with no curbs.

RESPONSE: No alleys are proposed as part of this land use application.
16. Sidewalks. Sidewalks shall be installed per CDC 92.010(H), Sidewalks. The residential sidewalk width is six feet plus planter strip as specified below. Sidewalks in commercial zones shall be constructed per subsection (A)(3) of this section. See also subsection C of this section. Sidewalk width may be reduced with City Engineer approval to the minimum amount (e.g., four feet wide) necessary to respond to site constraints such as grades, mature trees, rock outcroppings, etc., or to match existing sidewalks or right-of-way limitations.

RESPONSE: The applicant proposes to install a sidewalk along the sites Bland Circle frontage, as well as provide sidewalks along both sides of the proposed new local street with the extension of the street through the site.
17. Planter strip. The planter strip is between the curb and sidewalk providing space for a grassed or landscaped area and street trees. The planter strip shall be at least 6 feet wide to accommodate a fully matured tree without the boughs interfering with pedestrians on the sidewalk or vehicles along the curbline. Planter strip width may be reduced or eliminated, with City Engineer approval, when it cannot be corrected by site plan, to the minimum amount necessary to respond to site constraints such as grades, mature trees, rock outcroppings, etc., or in response to right-of-way limitations.

RESPONSE: The applicant proposes to install a planter strip along the sites Bland Circle frontage, as well as provide planter strips along both sides of new proposed local street with the extension of the street through the site.
18. Streets and roads shall be dedicated without any reservations or restrictions.

RESPONSE: No reservations or restrictions are being proposed with the street dedications.
19. All lots in a subdivision shall have access to a public street. Lots created by partition may have access to a public street via an access easement pursuant to the standards and limitations set forth for such accessways in Chapter 48 CDC.

RESPONSE: All proposed lots created by the subdivision in this land use application will have access to a public street per City requirements.
20. Gated streets. Gated streets are prohibited in all residential areas on both public and private streets. A driveway to an individual home may be gated.

RESPONSE: No gated streets are being proposed as part of this land use application.
21. Entryway treatments and street isle design. When the applicant desires to construct certain walls, planters, and other architectural entryway treatments within a subdivision, the following standards shall apply:
a. All entryway treatments except islands shall be located on private property and not in the public right-of-way.
b. Planter islands may be allowed provided there is no structure (i.e., brick, signs, etc.) above the curbline, except for landscaping. Landscaped islands shall be set back a minimum of 24 feet from the curbline of the street to which they are perpendicular.
c. All islands shall be in public ownership. The minimum aisle width between the curb and center island curbs shall be 14 feet. Additional width may be required as determined by the City Engineer.
d. Brick or special material treatments are acceptable at intersections with the understanding that the City will not maintain these sections except with asphalt overlay, and that they must meet the Americans with Disabilities Act (ADA) standards. They shall be laid out to tie into existing sidewalks at intersections.
e. Maintenance for any common areas and entryway treatments (including islands) shall be guaranteed through homeowner's association agreements, CC\&Rs, etc.
f. Under Chapter 52 CDC, subdivision monument signs shall not exceed 32 square feet in area.

RESPONSE: No entryway treatments are being proposed as part of this land use application; therefore, the above criteria do not apply to the applicant's request.
22. Based upon the determination of the City Manager or the Manager's designee, the applicant shall construct or cause to be constructed, or contribute a proportionate share of the costs, for all necessary off-site improvements identified by the transportation analysis commissioned to address CDC $85.170(B)(2)$ that are required to mitigate impacts from the proposed subdivision. The proportionate share of the costs shall be determined by the City Manager or Manager's designee, who shall assume that the proposed subdivision provides improvements in rough proportion to identified impacts of the subdivision. Off-site transportation improvements will include bicycle and pedestrian improvements as identified in the adopted City of West Linn TSP.

RESPONSE: The City Manager has not identified the need for any off-site improvements related to the development of this property; therefore, the above criterion does not apply to the applicant's proposal.
B. Blocks and lots.

1. General. The length, width, and shape of blocks shall be designed with due regard for the provision of adequate building sites for the use contemplated; consideration of the need for traffic safety, convenience, access, circulation, and control; and recognition of limitations and opportunities of topography and solar access.
2. Sizes. The recommended block size is 400 feet in length to encourage greater connectivity within the subdivision. Blocks shall not exceed 800 feet in length between street lines, except for blocks adjacent to arterial streets or unless topographical conditions or the layout of adjacent streets justifies a variation. Designs of proposed intersections shall demonstrate adequate sight distances to the City Engineer's specifications. Block sizes and proposed accesses must be consistent with the adopted TSP. Subdivisions of five or more acres that involve construction of a new street shall have block lengths of no more than 530 feet. If block lengths are greater than 530 feet, accessways on public easements or right-of-way for pedestrians and cyclists shall be provided not more than 330 feet apart. Exceptions can be granted when prevented by barriers such as topography, rail lines, freeways, pre-existing development, leases, easements or covenants that existed prior to May 1, 1995, or by requirements of Titles 3 and 13 of the UGMFP. If streets must cross water features protected pursuant to Title 3 UGMFP, provide a crossing every 800 to 1,200 feet unless habitat quality or the length of the crossing prevents a full street connection.

RESPONSE: One (1) new road is being proposed as part of this land use application. However, due to the existing development pattern in the surrounding area, as well as the sites topography, no new block lengths will be created with this development. Instead, when the proposed new street is extended with the development of the adjoining northern property, then a new block pattern will be established with a street connection to Weatherhill Road.
3. Lot size and shape. Lot or parcel size, width, shape, and orientation shall be appropriate for the location of the subdivision or partition, for the type of use contemplated, for potential utilization of solar access, and for the protection of drainageways, trees, and other natural features. No lot or parcel shall be dimensioned to contain part of an existing or proposed street. All lots or parcels shall be buildable. "Buildable" describes lots that are free of constraints such as wetlands, drainageways, etc., that would make home construction impossible. Lot or parcel sizes shall not be less than the size required by the zoning code unless as allowed by planned unit development (PUD).

RESPONSE: The proposed lots created through this subdivision are each a minimum of 7,000 square feet in size to accommodate single family detached dwelling units in the R-7 zone. All proposed lots meet or exceed the minimum requirements for front lot line length, lot width and lot depth.
4. Depth and width of properties reserved or laid out for commercial and industrial purposes shall be adequate to provide for the off-street parking and service facilities required by the type of use proposed.

RESPONSE: The applicant is proposing residential development for this site, so the above criterion is not applicable to the proposal.
5. Access. Access to subdivisions, partitions, and lots shall conform to the provisions of Chapter 48 CDC, Access, Egress and Circulation.

RESPONSE: The subdivision, as proposed, conforms to the provisions of Chapter 48 CDC.
6. Double frontage lots and parcels. Double frontage lots and parcels have frontage on a street at the front and rear property lines. Double frontage lots and parcels shall be avoided except where they are essential to provide separation of residential development from arterial streets or adjacent non-residential activities, or to overcome specific disadvantages of topography and orientation. A planting screen or impact mitigation easement at least 10 feet wide, and across which there shall be no right of access, may be required along the line of building sites abutting such a traffic artery or other incompatible use.

RESPONSE: This land use application does not include double frontage lots.
7. Lot and parcel side lines. The lines of lots and parcels, as far as is practicable, should run at right angles to the street upon which they face, except that on curved streets they should be radial to the curve.

RESPONSE: All proposed lot lines and side parcel lines run at right angles to the street as far as is practicable.
8. Flag lots. Flag lots can be created where it can be shown that no other reasonable street access is possible to achieve the requested land division. A single flag lot shall have a minimum street frontage of 15 feet for its accessway. Where two to four flag lots share a common accessway, the minimum street frontage and accessway shall be eight feet in width per lot. Common accessways shall have mutual maintenance agreements and reciprocal access and utility easements. The following dimensional requirements shall apply to flag lots:
a. Setbacks applicable to the underlying zone shall apply to the flag lot.
b. Front yard setbacks may be based on the rear property line of the lot or parcel which substantially separates the flag lot from the street from which the flag lot gains access. Alternately, the house and its front yard may be oriented in other directions so long as some measure of privacy is ensured, or it is part of a pattern of development, or it better fits the topography of the site.
c. The lot size shall be calculated exclusive of the accessway; the access strip may not be counted towards the area requirements.
d. The lot depth requirement contained elsewhere in this code shall be measured from the rear property line of the lot or parcel which substantially separates the flag lot from the street from which the flag lot gains access.
e. As per CDC 48.030, the accessway shall have a minimum paved width of 12 feet.
f. If the use of a flag lot stem to access a lot is infeasible because of a lack of adequate existing road frontage, or location of existing structures, the proposed lot(s) may be accessed from the public street by an access easement of a minimum 15-foot width across intervening property.

RESPONSE: The land use application proposes three (3) flag lots as part of the subdivision. Lots 5, 6, and 12 will be configured as a flag lots because no other reasonable street access is possible given the irregular shape of the parent parcel. Lot 12 is a single flag lot and it will have a minimum street frontage of 15.9 -feet. Lots 5 and 6 will share a common accessway, with a minimum street frontage and accessway of eight feet. As proposed the flag lots comply with all city requirements.
9. Large lots or parcels. In dividing tracts into large lots or parcels which, at some future time, are likely to be redivided, the approval authority may:
a. Require that the blocks be of such size and shape, and be so divided into building sites, and contain such easements and site restrictions as will provide for extension and opening of streets at intervals which will permit a subsequent division of any tract into lots or parcels of smaller size; or
b. Alternately, in order to prevent further subdivision or partition of oversized and constrained lots or parcels, restrictions may be imposed on the subdivision or partition plat.

RESPONSE: The proposed lots are not likely to be re-divided as the density proposed and the lot sizes proposed are consistent with the maximum allowable density per the site's zoning.
C. Pedestrian and bicycle trails.

1. Trails or multi-use pathways shall be installed, consistent and compatible with federal ADA requirements and with the Oregon Transportation Planning Rule, between subdivisions, cul-de-sacs, and streets that would otherwise not be connected by streets due to excessive grades, significant tree(s), and other constraints natural or manmade. Trails shall also accommodate bicycle or pedestrian traffic between neighborhoods and activity areas such as schools, libraries, parks, or commercial districts. Trails shall also be required where designated by the Parks Master Plan.
2. The all-weather surface (asphalt, etc.) trail should be eight feet wide at minimum for bicycle use and six feet wide at minimum for pedestrian use. Trails within 10 feet of a wetland or natural drainageway shall not have an all-weather surface, but shall have a soft surface as approved by the Parks Director. These trails shall be contained within a corridor dedicated to the City that is wide enough to provide trail users with a sense of defensible space. Corridors that are too narrow, confined, or with vegetative cover may be threatening and discourage use. Consequently, the minimum corridor width shall be 20 feet. Sharp curves, twists, and blind corners on the trail are to be avoided as much as possible to enhance defensible space. Deviations from the corridor and trail width are permitted only where topographic and ownership constraints require it.
3. Defensible space shall also be enhanced by the provision of a three- to four-foot-high matte black chain link fence or acceptable alternative along the edge of the corridor. The fence shall help delineate the public and private spaces.
4. The bicycle or pedestrian trails that traverse multi-family and commercial sites should follow the same defensible space standards but do not need to be defined by a fence unless required by the decision-making authority.
5. Except for trails within 10 feet of a wetland or natural drainageway, soft surface or gravel trails may only be used in place of a paved, all-weather surface where it can be shown to the Planning Director that the principal users of the path will be recreational, non-destination-oriented foot traffic, and that alternate paved routes are nearby and accessible.
6. The trail grade shall not exceed 12 percent except in areas of unavoidable topography, where the trail may be up to a 15 percent grade for short sections no longer than 50 feet. In any location where topography requires steeper trail grades than permitted by this section, the trail shall incorporate a short stair section to traverse the area of steep grades.

RESPONSE: Sidewalks are provided along the frontages of the property. No pedestrian or bicycle trails are required.
D. Transit facilities.

1. The applicant shall consult with Tri-Met and the City Engineer to determine the appropriate location of transit stops, bus pullouts, future bus routes, etc., contiguous to or within the development site. If transit service is planned to be provided within the next two years, then facilities such as pullouts shall be constructed per Tri-Met standards at the time of development. More elaborate facilities, like shelters, need only be built when service is existing or imminent. Additional rights-of-way may be required of developers to accommodate buses.
2. The applicant shall make all transit-related improvements in the right-of-way or in easements abutting the development site as deemed appropriate by the City Engineer.
3. Transit stops shall be served by striped and signed pedestrian crossings of the street within 150 feet of the transit stop where feasible. Illumination of the transit stop and crossing is required to enhance defensible space and safety. ODOT approval may be required.
4. Transit stops should include a shelter structure bench plus eight feet of sidewalk to accommodate transit users, non-transit-related pedestrian use, and wheelchair users. TriMet must approve the final configuration.

RESPONSE: No transit facilities have been identified by Tri-Met or the City Development Engineer adjacent to this property. The above criteria do not apply to the Applicant's proposal.
E. Grading. Grading of building sites shall conform to the following standards unless physical conditions demonstrate the propriety of other standards:

1. All cuts and fills shall comply with the excavation and grading provisions of the Uniform Building Code and the following:
a. Cut slopes shall not exceed one and one-half feet horizontally to one foot vertically (i.e., 67 percent grade).
b. Fill slopes shall not exceed two feet horizontally to one foot vertically (i.e., 50 percent grade). Please see the following illustration.
2. The character of soil for fill and the characteristics of lot and parcels made usable by fill shall be suitable for the purpose intended.
3. If areas are to be graded (more than any four-foot cut or fill), compliance with CDC 85.170(C) is required.
4. The proposed grading shall be the minimum grading necessary to meet roadway standards, and to create appropriate building sites, considering maximum allowed driveway grades.
5. Type I lands shall require a report submitted by an engineering geologist, and Type I and Type II lands shall require a geologic hazard report.
6. Repealed by Ord. 1635.
7. On land with slopes in excess of 12 percent, cuts and fills shall be regulated as follows:
a. Toes of cuts and fills shall be set back from the boundaries of separate private ownerships at least three feet, plus one-fifth of the vertical height of the cut or fill. Where an exception is required from that requirement, slope easements shall be provided.
b. Cuts shall not remove the toe of any slope where a severe landslide or erosion hazard exists (as described in subsection (G)(5) of this section).
c. Any structural fill shall be designed by a registered engineer in a manner consistent with the intent of this code and standard engineering practices, and certified by that engineer that the fill was constructed as designed.
d. Retaining walls shall be constructed pursuant to Section 2308(b) of the Oregon State Structural Specialty Code.
e. Roads shall be the minimum width necessary to provide safe vehicle access, minimize cut and fill, and provide positive drainage control.
8. Land over 50 percent slope shall be developed only where density transfer is not feasible. The development will provide that:
a. At least 70 percent of the site will remain free of structures or impervious surfaces.
b. Emergency access can be provided.
c. Design and construction of the project will not cause erosion or land slippage.
d. Grading, stripping of vegetation, and changes in terrain are the minimum necessary to construct the development in accordance with subsection J of this section.

RESPONSE: A geotechnical engineering report is included with this submittal. A grading plan has been included in the submitted plans which complies with all criteria of this subsection.
F. Water.

1. A plan for domestic water supply lines or related water service facilities shall be prepared consistent with the adopted Comprehensive Water System Plan, plan update, March 1987, and subsequent superseding revisions or updates.
2. Adequate location and sizing of the water lines.
3. Adequate looping system of water lines to enhance water quality.
4. For all non-single-family developments, there shall be a demonstration of adequate fire flow to serve the site.
5. A written statement, signed by the City Engineer, that water service can be made available to the site by the construction of on-site and off-site improvements and that such water service has sufficient volume and pressure to serve the proposed development's domestic, commercial, industrial, and fire flows.

RESPONSE: The Applicant proposes new water service connections for all proposed lots off of either Bland Circle or the proposed new local street, which will be extended through the site as part of this application. This proposal is consistent with the adopted Comprehensive Water System Plan. All proposed water improvements are included on the utility plan of the land use application.
G. Sewer.

1. A plan prepared by a licensed engineer shall show how the proposal is consistent with the Sanitary Sewer Master Plan (July 1989). Agreement with that plan must demonstrate how the sanitary sewer proposal will be accomplished and how it is gravity-efficient. The sewer system must be in the correct basin and should allow for full gravity service.
2. Sanitary sewer information will include plan view of the sanitary sewer lines, including manhole locations and depth or invert elevations.
3. Sanitary sewer lines shall be located in the public right-of-way, particularly the street, unless the applicant can demonstrate why the alternative location is necessary and meets accepted engineering standards.
4. Sanitary sewer line should be at a depth that can facilitate connection with downsystem properties in an efficient manner.
5. The sanitary sewer line should be designed to minimize the amount of lineal feet in the system.
6. The sanitary sewer line shall avoid disturbance of wetland and drainageways. In those cases where that is unavoidable, disturbance shall be mitigated pursuant to Chapter 32 CDC, Water Resource Area Protection, all trees replaced, and proper permits obtained. Dual sewer lines may be required so the drainageway is not disturbed.
7. Sanitary sewer shall be extended or stubbed out to the next developable subdivision or a point in the street that allows for reasonable connection with adjacent or nearby properties.
8. The sanitary sewer system shall be built pursuant to DEQ, City, and Tri-City Service District sewer standards. The design of the sewer system should be prepared by a licensed engineer, and the applicant must be able to demonstrate the ability to satisfy these submittal requirements or standards at the pre-construction phase.
9. A written statement, signed by the City Engineer, that sanitary sewers with sufficient capacity to serve the proposed development and that adequate sewage treatment plant capacity is available to the City to serve the proposed development.

RESPONSE: The Applicant proposes new sewer service connections for all proposed lots off of either Bland Circle or the proposed new local street, which will be extended through the site as part of this application. All proposed sewer improvements are included on the utility plan of the land use application. The proposed sanitary sewer system is consistent with the Sanitary Sewer Master Plan, is in the correct basin and allows for full gravity service.
H. Storm detention and treatment. All proposed storm detention and treatment facilities comply with the standards for the improvement of public and private drainage systems located in the West Linn Public Works Design Standards, there will be no adverse off-site impacts caused by the development (including impacts from increased intensity of runoff downstream or constrictions causing ponding upstream), and there is sufficient factual data to support the conclusions of the submitted plan.

RESPONSE: The Applicant's proposed stormwater detention and treatment design will include a public storm treatment/detention system consisting of water quality pond located at the sites southwestern corner along Bland Circle. The Applicant is also proposing to install individual LIDA planters on each lot for the future homes according to City requirements. All proposed storm drainage improvements are included on the utility plan Sheet 8 of the land use application.
I. Utility easements. Subdivisions and partitions shall establish utility easements to accommodate the required service providers as determined by the City Engineer. The developer of the subdivision shall make accommodation for cable television wire in all utility trenches and easements so that cable can fully serve the subdivision.

RESPONSE: The applicant will establish utility easements as determined by the City Engineer and shown on the preliminary plat. All required easements will be recorded with the recording of the final plat.

## J. Supplemental provisions.

1. Wetland and natural drainageways. Wetlands and natural drainageways shall be protected as required by Chapter 32 CDC, Water Resource Area Protection. Utilities may be routed through the protected corridor as a last resort, but impact mitigation is required.

RESPONSE: The proposed subdivision does not impact any wetlands and/or natural drainageways, therefore, the above criterion does not apply to the Applicant's proposal.
2. Willamette and Tualatin Greenways. The Willamette and Tualatin River Greenways shall be protected as required by Chapter 28 CDC, Willamette and Tualatin River Protection.

RESPONSE: No greenways exist on this site or have been identified for dedication on this property. This property is not adjacent to the Willamette or Tualatin River and, therefore, a River Greenway is not feasible on this site.
3. Street trees. Street trees are required as identified in the appropriate section of the municipal code and Chapter 54 CDC.

RESPONSE: There are no existing street trees along the site's frontage of Bland Circle. The applicant will install street trees as a component of the frontage improvements on Bland Circle, as well as along both sides of the proposed new local street with the extension of the street through the site.
4. Lighting. All subdivision street or alley lights shall meet West Linn Public Works Design Standards.

RESPONSE: The applicant proposes to install new light fixtures along both the sites Bland Circle frontage, as well as along the proposed new local street with the extension of the street through the site. All required street lights will provide adequate lighting per current City standards. A photometric plan has been provided for review. See Sheet 12 for more detail on the lighting plan.
5. Dedications and exactions. The City may require an applicant to dedicate land and/or construct a public improvement that provides a benefit to property or persons outside the property that is the subject of the application when the exaction is roughly proportional. No exaction shall be imposed unless supported by a determination that the exaction is roughly proportional to the impact of development.

RESPONSE: As mentioned previously, the applicant will be dedicating 7-feet of right-of-way along the sites Bland Circle frontage. Additionally, right-of-way will be dedicated for the extension of the proposed new local residential street through the site in accordance with city standards and specifications.
6. Underground utilities. All utilities, such as electrical, telephone, and television cable, that may at times be above ground or overhead shall be buried underground in the case of new development. The exception would be in those cases where the area is substantially built out and adjacent properties have above-ground utilities and where the development site's frontage is under 200 feet and the site is less than one acre. High voltage transmission
lines, as classified by Portland General Electric or electric service provider, would also be exempted. Where adjacent future development is expected or imminent, conduits may be required at the direction of the City Engineer. All services shall be underground with the exception of standard above-grade equipment such as some meters, etc.

RESPONSE: The Applicant's proposal complies with the above criterion because all new utility services are proposed to be located underground as part of the subdivision. With the exception of standard above-grade equipment, all services will be located underground pursuant to city standards and specifications.
7. Density requirement. Density shall occur at 70 percent or more of the maximum density allowed by the underlying zoning. These provisions would not apply when density is transferred from Type I and II lands as defined in CDC 02.030. Development of Type I or II lands are exempt from these provisions. Land divisions of three lots or less would also be exempt.

RESPONSE: The R-7 zone permits a maximum density of 6.4 dwelling units per net acre. Net acre is defined as "the total gross acres less the public right-of-way and other acreage deductions, as applicable. The net acreage of this site after removal of dedicated right-of- way is $108,900 \mathrm{sq}$. ft. or 2.5 acres. At 6.4 dwelling units per net acre, the maximum number of dwelling units on this site is 16 . This proposal is for a 15 -lot subdivision. The proposed density for the site is within 70 percent of the maximum allowable density. The requirements of this section have been satisfied.
8. Mix requirement. The "mix" rule means that developers shall have no more than 15 percent of the R-2.1 and R-3 development as single-family residential. The intent is that the majority of the site shall be developed as medium high density multi-family housing.

RESPONSE: This property is zoned R-7 and, therefore, the use of the parcel as an entirely residential development is permitted.
9. Heritage trees/significant tree and tree cluster protection. All heritage trees, as defined in the municipal code, shall be saved. Diseased heritage trees, as determined by the City Arborist, may be removed at his/her direction. All non-heritage trees and clusters of trees (three or more trees with overlapping dripline; however, native oaks need not have an overlapping dripline) that are considered significant by virtue of their size, type, location, health, or numbers shall be saved pursuant to CDC 55.100(B)(2). Trees are defined per the municipal code as having a trunk six inches in diameter or 19 inches in circumference at a point five feet above the mean ground level at the base of the trunk.

RESPONSE: The applicant has inventoried all trees on site and has consulted with the City's arborist to determine which trees on site are significant. The applicant is proposing tree preservation consistent with these requirements, as detailed in the tree protection plan (Sheet 3). The trees identified as significant on this site will be retained with the development of the subdivision.

## CHAPTER 92 REQUIRED IMPROVEMENTS FOR ALL DEVELOPMENT

The following improvements shall be installed at the expense of the developer and meet all City codes and standards:
A. Streets within subdivisions.

1. All streets within a subdivision, including alleys, shall be graded for the full right-of-way width and improved to the City's permanent improvement standards and specifications which include sidewalks and bicycle lanes, unless the decision-making authority makes the following findings:
a. The right-of-way cannot be reasonably improved in a manner consistent with City road standards or City standards for the protection of wetlands and natural drainageways.
b. The right-of-way does not provide a link in a continuous pattern of connected local streets, or, if it does provide such a link, that an alternative street link already exists or the applicant has proposed an alternative street which provides the necessary connectivity, or the applicant has proven that there is no feasible location on the property for an alternative street providing the link.
2. When the decision-making authority makes these findings, the decision-making authority may impose any of the following conditions of approval:
a. A condition that the applicant initiate vacation proceedings for all or part of the right-of-way.
b. A condition that the applicant build a trail, bicycle path, or other appropriate way.

If the applicant initiates vacation proceedings pursuant to subsection (A)(2)(a) of this section, and the right-of-way cannot be vacated because of opposition from adjacent property owners, the City Council shall consider and decide whether to process a City-initiated street vacation pursuant to Chapter 271 ORS.

Construction staging area shall be established and approved by the City Engineer. Clearing, grubbing, and grading for a development shall be confined to areas that have been granted approval in the land use approval process only. Clearing, grubbing, and grading outside of land use approved areas can only be approved through a land use approval modification and/or an approved Building Department grading permit for survey purposes. Catch basins shall be installed and connected to pipe lines leading to storm sewers or drainageways.

RESPONSE: No vacation proceedings are being requested by the Applicant, nor are they being required by the City for the proposed 15 -lot subdivision. All proposed streets within the subdivision, will be graded for the full right-of-way width and improved to the City's permanent improvement standards and specifications which include sidewalks and bicycle lanes, unless the decision-making authority determines otherwise.
B. Extension of streets to subdivisions. The extension of subdivision streets to the intercepting paving line of existing streets with which subdivision streets intersect shall be graded for the full right-of-way width and improved to a minimum street structural section and width of 24 feet.

RESPONSE: With the proposed 15 -lot subdivision, the applicant will be extending a new local residential street through the site and stubbing it to the site's northern property boundary for its future extension. The proposed new local residential street will include intercepting of an existing paving line with which the subdivision street intersects, and it will be graded for the full right-of-way width and improved to a minimum street structural section and width of 24 feet. As such, the above criterion does not apply to the applicant's proposal.
C. Local and minor collector streets within the rights-of-way abutting a subdivision shall be graded for the full right-of-way width and approved to the City's permanent improvement standards and specifications. The City Engineer shall review the need for street improvements and shall specify whether full street or partial street improvements shall be required. The City Engineer shall also specify the extent of storm drainage improvements required. The City Engineer shall be guided by the purpose of the City's systems development charge program in determining the extent of improvements which are the responsibility of the subdivider.

RESPONSE: There are not collector streets abutting the proposed subdivision, therefore, the above criterion does not apply to the Applicant's request.
D. Monuments. Upon completion of the first pavement lift of all street improvements, monuments shall be installed and/or reestablished at every street intersection and all points of curvature and points of tangency of street centerlines with an iron survey control rod. Elevation benchmarks shall be established at each street intersection monument with a cap (in a monument box) with elevations to a U.S. Geological Survey datum that exceeds a distance of 800 feet from an existing benchmark.

RESPONSE: All required monuments will be installed with the development of the subdivision consistent with the City Standards and Specification pursuant to the above criterion.
E. Storm detention and treatment. For Type I, II and III Iands (refer to definitions in Chapter 02 CDC), a registered civil engineer must prepare a storm detention and treatment plan, at a scale sufficient to evaluate all aspects of the proposal, and a statement that demonstrates:

1. The location and extent to which grading will take place indicating general contour lines, slope ratios, slope stabilization proposals, and location and height of retaining walls, if proposed.
2. All proposed storm detention and treatment facilities comply with the standards for the improvement of public and private drainage systems located in the West Linn Public Works Design Standards.
3. There will be no adverse off-site impacts, including impacts from increased intensity of runoff downstream or constrictions causing ponding upstream.
4. There is sufficient factual data to support the conclusions of the plan.
5. Per CDC 99.035, the Planning Director may require the information in subsections (E)(1), (2), (3) and (4) of this section for Type IV lands if the information is needed to properly evaluate the proposed site plan.

RESPONSE: The subject property does not contain any Type I, II, III and/or IV lands per the City's definitions in Chapter 02 of the CDC. As such, the above criteria do not apply to the Applicant's proposal.
F. Sanitary sewers. Sanitary sewers shall be installed to City standards to serve the subdivision and to connect the subdivision to existing mains.

1. If the area outside the subdivision to be directly served by the sewer line has reached a state of development to justify sewer installation at the time, the Planning Commission may recommend to the City Council construction as an assessment project with such arrangement with the subdivider as is desirable to assure financing his or her share of the construction.
2. If the installation is not made as an assessment project, the City may reimburse the subdivider an amount estimated to be a proportionate share of the cost for each connection made to the sewer by property owners outside of the subdivision for a period of 10 years from the time of installation of the sewers. The actual amount shall be determined by the City Administrator considering current construction costs.

RESPONSE: As mentioned previously in this narrative, the sanitary sewer lines will be installed to meet all City Standards and Specifications to serve the subdivision. As part of the submitted application materials, the Applicant has provided a detailed composite utility plan on Sheet 8 of the plan set that shows the line sizing and location for the proposed sewer lines.
G. Water system. Water lines with valves and fire hydrants providing service to each building site in the subdivision and connecting the subdivision to City mains shall be installed. Prior to starting building construction, the design shall take into account provisions for extension beyond the subdivision and to adequately grid the City system. Hydrant spacing is to be based on accessible area served according to the City Engineer's recommendations and City standards. If required water mains will directly serve property outside the subdivision, the City may reimburse the developer an amount estimated to be the proportionate share of the cost for each connection made to the water mains by property owners outside the subdivision for a period of 10 years from the time of installation of the mains. If oversizing of water mains is required to areas outside the subdivision as a general improvement, but to which no new connections can be identified, the City may reimburse the developer that proportionate share of the cost for oversizing. The actual amount and reimbursement method shall be as determined by the City Administrator considering current or actual construction costs.

RESPONSE: As mentioned previously in this narrative, the water lines will be installed to meet all City Standards and Specifications to serve the subdivision. As part of the submitted application materials, the Applicant has provided a detailed composite utility plan on Sheet 8 of the plan set that shows the line sizing and location for the proposed water lines. Prior to starting building construction, the Applicant will work with the City's Engineering and Fire Departments to assure the design for the water system takes into account provisions for extension beyond the subdivision and to adequately grid the

City system. Hydrant spacing will also be addressed at that time to make sure they are located in an accessible area pursuant to City Standards.

## H. Sidewalks.

1. Sidewalks shall be installed on both sides of a public street and in any special pedestrian way within the subdivision, except that in the case of primary or secondary arterials, or special type industrial districts, or special site conditions, the Planning Commission may approve a subdivision without sidewalks if alternate pedestrian routes are available. In the case of the double-frontage lots, provision of sidewalks along the frontage not used for access shall be the responsibility of the developer. Providing front and side yard sidewalks shall be the responsibility of the land owner at the time a request for a building permit is received. Additionally, deed restrictions and CC\&Rs shall reflect that sidewalks are to be installed prior to occupancy and it is the responsibility of the lot or homeowner to provide the sidewalk, except as required above for double-frontage lots.
2. On local streets serving only single-family dwellings, sidewalks may be constructed during home construction, but a letter of credit shall be required from the developer to ensure construction of all missing sidewalk segments within four years of final plat approval pursuant to CDC 91.010(A)(2).
3. The sidewalks shall measure at least six feet in width and be separated from the curb by a six-foot minimum width planter strip. Reductions in widths to preserve trees or other topographic features, inadequate right-of-way, or constraints, may be permitted if approved by the City Engineer in consultation with the Planning Director.
4. Sidewalks should be buffered from the roadway on high volume arterials or collectors by landscape strip or berm of three and one-half-foot minimum width.
5. The City Engineer may allow the installation of sidewalks on one side of any street only if the City Engineer finds that the presence of any of the factors listed below justifies such waiver:
a. The street has, or is projected to have, very low volume traffic density;
b. The street is a dead-end street;
c. The housing along the street is very low density; or
d. The street contains exceptional topographic conditions such as steep slopes, unstable soils, or other similar conditions making the location of a sidewalk undesirable.

RESPONSE: The Applicant will be installing a sidewalk along the sites Bland Circle frontage, as well as along both sides of the proposed new local residential street with the extension of the street through the site. All proposed and required sidewalks will be installed pursuant to the City's design standards and specifications. Should the developer choose to install the sidewalks with the construction of the homes, then a letter of credit will be provided to the City to ensure construction of all missing sidewalks within four years of the final plat approval
I. Bicycle routes. If appropriate to the extension of a system of bicycle routes, existing or planned, the Planning Commission may require the installation of separate bicycle lanes within streets and separate bicycle paths.

RESPONSE: Per the City's Transportation System Plan (TSP) there are no bicycle routes identified, either existing or planned, for the subject property.
J. Street name signs. All street name signs and traffic control devices for the initial signing of the new development shall be installed by the City with sign and installation costs paid by the developer.

RESPONSE: All required street signs, whether street names or traffic control signs, will be installed pursuant to the City's Standards and Specifications as outlined in the above criterion. The Applicant is agreeable to paying the installation costs associated with the installation of the required signage.
K. Dead-end street signs. Signs indicating "future roadway" shall be installed at the end of all discontinued streets. Signs shall be installed by the City per City standards, with sign and installation costs paid by the developer.

RESPONSE: The Applicant is proposing to terminate the proposed new local residential street in a "stubbed" street design. A barricade will be installed at the end of the street and any required signage will be installed consistent with the City's development codes.
L. Signs indicating future use shall be installed on land dedicated for public facilities (e.g., parks, water reservoir, fire halls, etc.). Sign and installation costs shall be paid by the developer.

RESPONSE: No public facilities are being proposed as part of this development request, therefore, the above criterion does not apply to the Applicant's proposal.
M. Street lights. Street lights shall be installed and shall be served from an underground source of supply. The street lighting shall meet IES lighting standards. The street lights shall be the shoe-box style light (flat lens) with a 30-foot bronze pole in residential (non-intersection) areas. The street light shall be the cobra head style (drop lens) with an approximate 50-foot (sized for intersection width) bronze pole. The developer shall submit to the City Engineer for approval of any alternate residential, commercial, and industrial lighting, and alternate lighting fixture design. The developer and/or homeowners association is required to pay for all expenses related to street light energy and maintenance costs until annexed into the City.

RESPONSE: All required street lights will be installed and will be served from an underground source of supply. All required street lighting will meet IES lighting standards and the street light will be the "shoebox" style light (i.e. flat lens).
N. Utilities. The developer shall make necessary arrangements with utility companies or other persons or corporations affected for the installation of underground lines and facilities. Electrical lines and other wires, including but not limited to communication, street lighting, and cable television, shall be placed underground.

RESPONSE: Consistent with the above criterion, the Applicant's developer will make all necessary arrangements with the franchised utility companies or other persons or corporations affected for the installation of underground lines and facilities. Electrical lines and other wires, including but not limited to communication, street lighting, and cable television, will be placed underground as required by the City's Community Development Code (CDC).
O. Curb cuts and driveways. Curb cuts and driveway installations are not required of the subdivider at the time of street construction, but, if installed, shall be according to City standards. Proper curb cuts and hard-surfaced driveways shall be required at the time buildings are constructed.

RESPONSE: All curb cuts and driveway installations will be installed at the time buildings are constructed on the lots. However, should the developer decide to install some curb cuts and driveways at the time of street construction, then, if installed, they will be installed according to City standards.
P. Street trees. Street trees shall be provided by the City Parks and Recreation Department in accordance with standards as adopted by the City in the Municipal Code. The fee charged the subdivider for providing and maintaining these trees shall be set by resolution of the City Council.

RESPONSE: The Applicant agrees to install all required street trees pursuant to the above criterion by working with the City's Parks and Recreation Department to obtain the necessary street trees. Additionally, the Applicant is agreeable to paying the fees set by resolution of the City Council for providing and maintain the requires street trees.
Q. Joint mailbox facilities shall be provided in all residential subdivisions, with each joint mailbox serving at least two, but no more than eight, dwelling units. Joint mailbox structures shall be placed in the street right-of-way adjacent to roadway curbs. Proposed locations of joint mailboxes shall be designated on a copy of the tentative plan of the subdivision, and shall be approved as part of the tentative plan approval. In addition, sketch plans for the joint mailbox structures to be used shall be submitted and approved by the City Engineer prior to final plat approval.

RESPONSE: The Applicant will work with the US Postal Service (USPS) to identify a strategic location for two (2) joint mailbox facilities to serve the proposed 15 -lot subdivision. The joint mailbox facilities will be installed in the street right-of-way adjacent to the roadway curbs. As part of the tentative plan approval, the Applicant requests, as a condition of any final approval, that the required sketch plans for the joint mailbox structures to be used shall be submitted and approved by the City Engineer prior to final plat approval.

### 92.030 IMPROVEMENT PROCEDURES

In addition to other requirements, improvements installed by the developer, either as a requirement of these regulations or at the developer's own option, shall conform to the requirements of this title and permanent improvement standards and specifications adopted by the City and shall be installed in accordance with the following procedure:
A. Improvement work shall not be commenced until plans have been checked for adequacy and approved by the City. To the extent necessary for evaluation of the proposal, the improvement plans may be required before approval of the tentative plan of a subdivision or partition. Plans shall be prepared in accordance with the requirements of the City.
B. Improvement work shall not be commenced until the City has been notified in advance, and if work has been discontinued for any reason, it shall not be resumed until the City has been notified.
C. Improvements shall be constructed under the Engineer. The City may require changes in typical sections and details in the public interest if unusual conditions arise during construction to warrant the change.
D. All underground utilities, sanitary sewers, and storm drains installed in streets by the subdivider or by any utility company shall be constructed prior to the surfacing of the streets. Stubs for service connections for underground utilities and sanitary sewers shall be placed to a length obviating the necessity for disturbing the street improvements when service connections are made.
E. A digital and mylar map showing all public improvements as built shall be filed with the City Engineer upon completion of the improvements.

RESPONSE: All requirements and improvements installed by the developer, either as a requirement of the City's CDC regulations or at the developer's own option, will conform to the requirements of this title and permanent improvement standards and specifications adopted by the City and will be installed in accordance with the above procedures. The Applicant is agreeable, as a condition of any final approval, that all improvements be installed in accordance with all City standards and specifications adopted by the City.

## SUMMARY AND CONCLUSION

Based upon the application materials submitted herein, the Applicant respectfully requests approval from the City's Planning Department of this application for a 15 -lot residential subdivision.

# City of West Linn <br> PRE-APPLICATION CONFERENCE MEETING <br> SUMMARY NOTES 

October 4, 2018

SUBJECT: Application for a 17 lot subdivision at 23000/23010 Bland Circle.

FILE:
ATTENDEES: Applicants: Steve Miller\& Eric Evans (Emerio Designs), Bob Schultz
Staff: Jennifer Arnold (Planning), Morgan Palmer (Engineering)
Public: Carl Snow, Margot Kelly, Bob Bauer, Ben Looney, Roberta Schwarz, and Kathie Halicki

The following is a summary of the meeting discussion provided to you from staff meeting notes. Additional information may be provided to address any "follow-up" items identified during the meeting. These comments are PRELIMINARY in nature. Please contact the Planning Department with any questions regarding approval criteria, submittal requirements, or any other planning-related items. Please note disclaimer statement below.

## SITE INFORMATION:

Site Address: $\quad 23000 / 23010$ Bland Circle (21E35B tax lot 0404/ 21E35B tax lot 0400)
Site Area: $\quad 143,585$ square feet
Neighborhood: Robinwood N.A.
Comp. Plan: Low density residential
Zoning: R-7 (Single Family Residential Detached and Attached / 7,000 square foot minimum lot size for detached homes)
Applicable code: CDC Chapter 12: R-7
CDC Chapter 48: Access, Egress and Circulation
CDC Chapter 85: Land Division
CDC Chapter 92: Required Improvements

PROJECT DETAILS: This property, 23000/23010 Bland Circle is 143,585 square feet or approximately 3.29 acres. The property is also zoned R-7 which allows development of 7,000 square foot lots. The applicant is proposing up to 17 lots. There is an existing right-of-way road stub on the north side of Fircrest Drive that the applicant wishes to extend north through the development. This ROW stub is only 40 feet wide, so the continued road would need to be widened to meet Public Works Street Standards. There is a trail on the south side of proposed lots 17,16 , and 15 that will be required to be maintained by the future property owners of those lots.

Engineering/TVFR Comments: Contact Morgan Palmer at 17mpalmer@westlinnoregon.gov for Engineering comments and Jason Arn at Jason.arn@tvfr.com for TVFR comments.

Neighborhood/Public Concerns: 1. Level of Service (Traffic) on Bland Circle and Fircrest Drive; 2. Internal street width for on-street parking within the development and possible TIA requested 3. Tree protection.

PROCESS: The subdivision submittal requirements and approval criteria of CDC Chapters 48, 85, and 92 apply. A stormwater report, geotechnical report, tree inventory are required. A traffic Impact Analysis may be required if this this project meets the criteria outlined in CDC Chapter 85, or the Public Works Director believes it's necessary. The subdivision application has a deposit fee of $\$ 4,200$ plus $\$ 200$ per lot (Expedited land division applications require different fee).

N/A is not an acceptable response to the approval criteria. The submittal requirements may be waived, but the applicant must first identify the specific submittal requirement and request, in letter form, that it be waived by the Planning Manager and must identify the specific grounds for that waiver. More detail given in the responses only helps your application.

A neighborhood meeting is required per CDC 99.038. Follow the requirements of that section explicitly. The site is within the Savanna Oaks neighborhood. Contact their president at SavannaOaksNA@westlinnoregon.gov.

Once the subdivision application and deposit/fee are submitted, the City has 30 days to determine if the application is complete or not. Once the submittal is deemed complete, the City has 120 days to exhaust all local review. The review includes providing notice per CDC Chapter 99 and scheduling a public hearing with the Planning Commission. Appeals of the Planning Commission's decision are heard by City Council and subsequently by the Land Use Board of Appeals.

An Expedited Land Division (ELD) is allowed under the provisions of Oregon Revised Statute (ORS) 197.360-380 as an alternative procedure for land division (minor partition and subdivision) applications. (See also CDC 99.060(E). which does not allow a Variance to be consolidated with an ELD application.) The applicant was advised of the ELD option and given an ELD acknowledgement form to sign. The ELD deposit fee is $\$ 4,000$ plus $\$ 300$ per lot plus any applicable referee fees. A signed ELD acknowledgement form declaring intent to apply for a standard subdivision is required at the time of application submittal. Otherwise, the application will be processed as an ELD.

## Typical land use applications can take 6-10 months from beginning to end.

DISCLAIMER: This summary discussion covers issues identified to date. It does not imply that these are the only issues. The burden of proof is on the applicant to demonstrate that all approval criteria have been met. These notes do not constitute an endorsement of the proposed application or provide any assurance of potential outcomes. Staff responses are based on limited material presented at this pre-application meeting. New issues, requirements, etc. could emerge as the application is developed. A new pre-application conference would have to be scheduled after 18 months and these notes would no longer be valid. Any changes to the CDC standards may require a different design or submittal.

# EMERIO <br>  

CIVIL ENGINEERS, SURVEYORS \& PLANNERS

November 9, 2018

## Willamette Neighborhood Association

Kathie Halicki, President
2307 Falcon Dr.
West Linn, OR 97068
RE: 2300 and 23010 Bland Circle- Proposed 17 Lot Residential Subdivision

Dear Mrs. Halicki,
Emerio Design, LLC acts on behalf of the Schultz Development Group (SDG), regarding the planned subdivision of a property located at 2300 and 23010 Bland Circle, West Linn 97068. Tax lot 201 does not have an assigned address. The location of the property is shown on the attached map. The tax lot number for the property is 2 S1E35B 400, 404, and 201. The property is located inside the City of West Linn's boundaries and it is zoned R-7 for Single Family Dwellings.

Schultz Development Group is considering a subdivision of the 3.49-acre property in order to create seventeen (17) new single-family residential lots. Each of the seventeen proposed lots will meet or exceed 7,000 square feet, which is the minimum lot size within the R-7 zoning district.

Before finalizing an application to the City's Planning Department for the proposed subdivision, we would like to take the opportunity to discuss this proposal with the members of the Savana Oaks Neighborhood Association and property owners residing within 500 feet of the property.

A meeting to discuss this project has been scheduled at the following time and location:

Informational Meeting
Tuesday, December $4^{\text {th }}$ at 7:00pm
TV\&R Fire Station - Community Room
1860 Willamette Falls Drive
West Linn, OR 97068
The purpose of this meeting will be to provide a forum for surrounding property owners and residents to review the proposal and to identify issues so they can be given proper consideration. This meeting will provide the opportunity for the public to share with the project team any specific information about the property involved. The project team will try to answer questions related to how the project meets the relevant development standards consistent with West Linn's land use regulations.

Please note that this will be an informational meeting based on preliminary development plans and that these plans may change before the application is submitted to the City.

We look forward to discussing this proposal with you. Please feel free to contact us by emailing stevem@emeriodesign.com if you have any questions.

Sincerely,

Steve Miller, Principal Planner
Emerio Design, LLC

CIVIL ENGINEERS, SURVEYORS \& PLANNERS

November 9, 2018

## Savana Oaks Neighborhood Association

Ed Schwarz, President
2206 Tannler Drive
West Linn, OR 97068

RE: 2300 and 23010 Bland Circle- Proposed 17 Lot Residential Subdivision

Dear Mr. Schwarz,

Emerio Design, LLC acts on behalf of the Schultz Development Group (SDG), regarding the planned subdivision of a property located at 2300 and 23010 Bland Circle, West Linn 97068. Tax lot 201 does not have an assigned address. The location of the property is shown on the attached map. The tax lot number for the property is 2 S1E35B 400, 404, and 201. The property is located inside the City of West Linn's boundaries and it is zoned R-7 for Single Family Dwellings.

Schultz Development Group is considering a subdivision of the 3.49-acre property in order to create seventeen (17) new single-family residential lots. Each of the seventeen proposed lots will meet or exceed 7,000 square feet, which is the minimum lot size within the R-7 zoning district.

Before finalizing an application to the City's Planning Department for the proposed subdivision, we would like to take the opportunity to discuss this proposal with the members of the Savana Oaks Neighborhood Association and property owners residing within 500 feet of the property.

The purpose of this meeting will be to provide a forum for surrounding property owners and residents to review the proposal and identify issues so they can be given proper consideration. These meetings are required so the public can share any specific information about the property with the project team. The project team will try to answer questions related to how the project meets the relevant development standards consistent with West Linn's land use regulations.

We would like to formally request a meeting with the Savana Oaks Neighborhood Association. As we discussed via email, we would like to be included on the agenda of the Savana Oaks Neighborhood Association's December $4^{\text {th }}$ meeting. This is the date we will use to send notification to residents located within the City's 500-foot notification boundary. A copy of this letter also will be sent to the Willamette Neighborhood Association by certified mail since the neighborhood boundary is within 500 feet of this property.

Please note that this will be an informational meeting based upon preliminary development plans and that these plans may change before the application is submitted to the City. If the proposed meeting is acceptable, we would ask that you please respond to this letter with an email to stevem@emeriodesign.com or phone call to my cell 541-318-7487.

Sincerely,

Steve Miller, Principal Planner
Emerio Design, LLC

# EMERIO <br>  

CIVIL ENGINEERS, SURVEYORS \& PLANNERS

November 9, 2018

Savana Oaks Neighborhood Association<br>Roberta Schwarz, President Designee<br>2206 Tannler Drive<br>West Linn, OR 97068

RE: 2300 and 23010 Bland Circle-Proposed 17 Lot Residential Subdivision

Dear Mrs. Schwarz,

Emerio Design, LLC acts on behalf of the Schultz Development Group (SDG), regarding the planned subdivision of a property located at 2300 and 23010 Bland Circle, West Linn 97068. Tax lot 201 does not have an assigned address. The location of the property is shown on the attached map. The tax lot number for the property is 2 S1E35B 400, 404, and 201. The property is located inside the City of West Linn's boundaries and it is zoned R-7 for Single Family Dwellings.

Schultz Development Group is considering a subdivision of the 3.49-acre property in order to create seventeen (17) new single-family residential lots. Each of the seventeen proposed lots will meet or exceed 7,000 square feet, which is the minimum lot size within the R-7 zoning district.

Before finalizing an application to the City's Planning Department for the proposed subdivision, we would like to take the opportunity to discuss this proposal with the members of the Savana Oaks Neighborhood Association and property owners residing within 500 feet of the property.

The purpose of this meeting will be to provide a forum for surrounding property owners and residents to review the proposal and identify issues so they can be given proper consideration. These meetings are required so the public can share any specific information about the property with the project team. The project team will try to answer questions related to how the project meets the relevant development standards consistent with West Linn's land use regulations.

We would like to formally request a meeting with the Savana Oaks Neighborhood Association. As we discussed via email, we would like to be included on the agenda of the Savana Oaks Neighborhood Association's December $4^{\text {th }}$ meeting. This is the date we will use to send notification to residents located within the City's 500-foot notification boundary. A copy of this letter also will be sent to the Willamette Neighborhood Association by certified mail since the neighborhood boundary is within 500 feet of this property.

Please note that this will be an informational meeting based upon preliminary development plans and that these plans may change before the application is submitted to the City. If the proposed meeting is acceptable, we would ask that you please respond to this letter with an email to stevem@emeriodesign.com or phone call to my cell 541-318-7487.

Sincerely,

Steve Miller, Principal Planner
Emerio Design, LLC

CIVIL ENGINEERS, SURVEYORS \& PLANNERS

November 9, 2018

Neighborhood Meeting Notice
RE: Proposed 17 Lot Residential Subdivision

To Our Neighbors:

Emerio Design, LLC acts on behalf of the Schultz Development Group (SDG) regarding the planned subdivision of a property located at 2300 and 23010 Bland Cir, West Linn 97068. Tax lot 201 does not have an assigned address. The location of the property is shown on the attached map. The tax lot numbers for the property are 2S1E35B 400, 404, and 201. The property is located inside the City of West Linn's boundaries and it is zoned R-7 for Single Family Dwellings. Prior to applying to the City of West Linn for subdivision review, we would like to take the opportunity to discuss the proposal in more detail with you. Before finalizing an application to the City's Planning Department for the proposed subdivision, we would like to take the opportunity to discuss this proposal with the members of the Savana Oaks and Willamette Neighborhood Associations and property owners residing within 500 feet of the property.

A meeting to discuss this project has been scheduled at the following time and location:

> Informational Meeting
> Tuesday, December $4^{\text {th }}$ at 7:00pm TV\&R Fire Station - Community Room 1860 Willamette Falls Drive West Linn, OR 97068

The purpose of this meeting will be to provide a forum for surrounding property owners and residents to review the proposal and to identify issues so they can be given proper consideration. This meeting will provide the opportunity for the public to share with the project team any specific information about the property involved. The project team will try to answer questions related to how the project meets the relevant development standards consistent with West Linn's land use regulations.

Please note that this will be an informational meeting based on preliminary development plans and that these plans may change before the application is submitted to the City.

We look forward to discussing this proposal with you. Please feel free to contact us by emailing stevem@emeriodesign.com if you have any questions.

Sincerely,
Steve Miller, Principal Planner
Emerio Design, LLC

21E35B TLs 201, 400, 404


This map is a copy of public record and is provided solely for information purposes. WFG National Title assumes no liability for variations, if any, in dimensions, area or location of the premises or the location of improvements.

## WFG NATIONAL TITLE: FARM REPORT / Clackamas (OR)

| Owner | : 22870 Weatherhill LLC |  |  | Parcel \# | : 00405449 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 22870 S Weatherhill Rd West Linn 97068 |  |  | Ref Parcel \# | : 21E35B 00405 |
| Mail | : 12870 SW Morningstar Dr Tigard OR 97223 |  |  | 17-18 Taxes | : \$11,874 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$959,007 |
| MapGrid | : 686-H7 |  |  | Millage Rate | : 17.5004 |
| Sale Date | : 09/10/2018 | Sale Price | : \$1,000,000 | Doc \# | : 0000055875 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 304 BLAND ACRES PT LT 23\|Y|182048 |  |  | Market Land | \$489,567 |
|  | : |  |  | Mkt Structure | : \$469,440 |
| Bedrooms: 3 | Bath: 2.5 | YearBuilt :1986 | BldgSqFt: 3687 | Lot SqFt: 111535 | Acres: 2.5605 |
| \#2 |  |  |  |  |  |
| Owner | : Atherton, David |  |  | Parcel \# | : 01858378 |
| Site | : 1980 Alpine Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA04700 |
| Mail | : 1980 Alpine Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$9,970 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$758,676 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 12/18/2009 | Sale Price | : \$575,000 | Doc \# | : 0000086830 |
| Prior Sale Date |  | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : Subdivision RIDGE VIEW EST \#2 PT LTS 41\&42 3499\|Y| |  |  | Market Land | : \$226,536 |
|  |  |  |  | Mkt Structure | : \$532,140 |
| Bedrooms: 4 | Bath: 2.5 | YearBuilt :1999 | BldgSqFt: 3809 | Lot SqFt: 10890 | Acres: 0.25 |
| \#3 |  |  |  |  |  |
| Owner | : Babcock, Brian E |  |  | Parcel \# | : 00391695 |
| Site | : 22995 Bland Cir West Linn 97068 |  |  | Ref Parcel \# | : 21E26C 01400 |
| Mail | : 22995 Bland Cir West Linn OR 97068 |  |  | 17-18 Taxes | \$6,325 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$517,610 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 05/31/2017 | Sale Price | : \$600,000 | Doc \# | : 0000036366 |
| Prior Sale Date | : 07/15/2015 | Prior Sale Price | : \$470,000 | Prior Doc \# | : 0000046193 |
| Legal | : 304 BLAND AC PT LT 7\|Y|182048 |  |  | Market Land | : \$300,200 |
|  |  |  |  | Mkt Structure | : \$217,410 |
| Bedrooms: 3 | Bath: 2 | YearBuilt :1974 | BldgSqFt: 2860 | Lot SqFt: 45437 | Acres: 1.0431 |

\#4

| Owner | : Babcock, Ronald |  |  | Parcel \# | : 00391677 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 22985 Bland Cir West Linn 97068 |  |  | Ref Parcel \# | : 21E26C 01301 |
| Mail | : 22985 Bland Cir West Linn OR 97068 |  |  | 17-18 Taxes | : \$4,255 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$416,746 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 07/27/2018 | Sale Price | : \$578,000 | Doc \# | : 0000046520 |
| Prior Sale Date |  | Prior Sale Price | : | Prior Doc \# |  |
| Legal | : 304 BLAND AC PT LT 7\|Y|182048 |  |  | Market Land | : \$278,436 |
|  |  |  |  | Mkt Structure | \$138,310 |
| Bedrooms: 4 | Bath: 1 | Built :1979 | BldgSqFt: 2020 | 46418 | cres: 1.0656 |



## WFG NATIONAL TITLE: FARM REPORT / Clackamas (OR)

| Owner | : Bauer, Robert L |  |  | Parcel \# | : 00405430 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 23000 Bland Cir West Linn 97068 |  |  | Ref Parcel \# | : 21E35B 00404 |
| Mail | : 23000 S Bland Cir West Linn OR 97068 |  |  | 17-18 Taxes | : \$13,305 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$1,233,451 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 08/24/2012 | Sale Price | : | Doc \# | : 2012-055943 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 304 BLAND ACRES PT LT 24\|Y|182048 |  |  | Market Land | : \$494,401 |
|  | : |  |  | Mkt Structure | \$739,050 |
| Bedrooms: 5 | Bath: 4 | YearBuilt :1981 | BldgSqFt: 5470 | Lot SqFt: 75045 | Acres: 1.7228 |
| \#7 |  |  |  |  |  |
| Owner | : Beachy, Jeff L |  |  | Parcel \# | : 01858564 |
| Site | : 23020 Bland Cir West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA06600 |
| Mail | : 23020 Bland Cir West Linn OR 97068 |  |  | 17-18 Taxes | : \$9,026 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$664,083 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 07/26/1999 | Sale Price | : \$91,900 | Doc \# | : 1999-073653 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 60\|Y|182048 |  |  | Market Land | \$198,633 |
|  | : |  |  | Mkt Structure | \$465,450 |
| Bedrooms: 5 | Bath: 2.5 | YearBuilt :2000 | BldgSqFt: 4868 | Lot SqFt: 7309 | Acres: 0.1678 |
| \#8 |  |  |  |  |  |
| Owner | : Berning, Daniel S |  |  | Parcel \# | : 01858555 |
| Site | : 23026 Bland Cir West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA06500 |
| Mail | : 23026 Bland Cir West Linn OR 97068 |  |  | 17-18 Taxes | : \$9,819 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$721,616 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 11/21/2013 | Sale Price | : \$644,000 | Doc \# | :0000078387 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 59\|Y|182048 |  |  | Market Land | : \$224,306 |
|  | : |  |  | Mkt Structure | : \$497,310 |
| Bedrooms: 4 | Bath: 3.5 | YearBuilt :2001 | BldgSqFt: 3832 | Lot SqFt: 7283 | Acres: 0.1672 |
| \#9 |  |  |  |  |  |
| Owner | : Black, Bernard |  |  | Parcel \# | : 00391686 |
| Site | : 22975 Bland Cir West Linn 97068 |  |  | Ref Parcel \# | : 21E26C 01302 |
| Mail | : 22975 Bland Cir West Linn OR 97068 |  |  | 17-18 Taxes | \$3,890 |
| Land Use | : 101 Residential land improved |  |  | Market Total | \$394,495 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 04/25/2001 | Sale Price | : \$185,000 | Doc \# | : 0000029468 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 304 BLAND ACRES PT LT 7\|Y|182048 |  |  | Market Land | : \$255,555 |
|  | : |  |  | Mkt Structure | : \$138,940 |
| Bedrooms: 4 | Bath: 2 | YearBuilt :1935 | BldgSqFt: 2258 | Lot SqFt: 42667 | Acres: 0.9795 |
| \#10 |  |  |  |  |  |
| Owner | : Bower, Richard |  |  | Parcel \# | : 00406741 |
| Site | : 1767 Killarney Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BB10900 |
| Mail | : 1767 Killarney Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$5,670 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$431,201 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 05/28/1999 | Sale Price | : \$26,720 | Doc \# | : 0000054582 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 2350 GREEN HILLS EST IV LT 17 BLK 3\|Y|182048 |  |  | Market Land | : \$165,891 |
|  |  |  |  | Mkt Structure | : \$265,310 |
| Bedrooms: 3 | Bath: 2.5 | YearBuilt :1985 | BldgSqFt: 2068 | Lot SqFt: 9997 | Acres: 0.2295 |

## WFG NATIONAL TITLE: FARM REPORT / Clackamas (OR)

| Owner | : Buck, Patrick G |  |  | Parcel \# | : 01858573 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 23016 Bland Cir West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA06700 |
| Mail | : 23016 Bland Cir West Linn OR 97068 |  |  | 17-18 Taxes | : \$9,064 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$665,883 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 09/30/2015 | Sale Price | : \$650,000 | Doc \# | : 0000066257 |
| Prior Sale Date | : 11/13/2014 | Prior Sale Price | : \$650,000 | Prior Doc \# | : 0000058580 |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 61\|Y|182048 |  |  | Market Land | : \$198,633 |
|  | : |  |  | Mkt Structure | : \$467,250 |
| Bedrooms: 5 | Bath: 4 | YearBuilt :2001 | BldgSqFt: 4242 | Lot SqFt: 7157 | Acres: 0.1643 |
| \#12 |  |  |  |  |  |
| Owner | : Buser, Mark |  |  | Parcel \# | : 01858396 |
| Site | : 1960 Alpine Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA04900 |
| Mail | : 1960 Alpine Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$10,850 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$796,916 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 04/30/2002 | Sale Price | : \$529,000 | Doc \# | : 2002-054433 |
| Prior Sale Date |  | Prior Sale Price |  | Prior Doc \# |  |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 43\|Y|182048 |  |  | Market Land | : \$226,536 |
|  | : |  |  | Mkt Structure | : \$570,380 |
| Bedrooms: 4 | Bath: 3.5 | YearBuilt :2001 | BldgSqFt: 4009 | Lot SqFt: 7174 | Acres: 0.1647 |
| \#13 |  |  |  |  |  |
| Owner | : Byrne, Gregory W Jr |  |  | Parcel \# | : 01858467 |
| Site | : 1985 Alpine Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA05600 |
| Mail | : 1985 Alpine Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$7,691 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$563,433 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 11/29/2007 | Sale Price | : \$554,000 | Doc \# | : 0000100156 |
| Prior Sale Date |  | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 50\|Y|182048 |  |  | Market Land | : \$198,633 |
|  | : |  |  | Mkt Structure | : \$364,800 |
| Bedrooms: 4 | Bath: 2.5 | YearBuilt :2003 | BldgSqFt: 3450 | Lot SqFt: 7018 | Acres: 0.1611 |
| \#14 |  |  |  |  |  |
| Owner | : Cabine, William M |  |  | Parcel \# | : 01858323 |
| Site | : 2180 Crestview Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA04200 |
| Mail | : 2180 Crestview Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$7,394 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$552,183 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 11/17/2009 | Sale Price | : \$420,000 | Doc \# | : 0000079966 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 36\|Y|182048 |  |  | Market Land | : \$198,633 |
|  | : |  |  | Mkt Structure | : \$353,550 |
| Bedrooms: 4 | Bath: 2.5 | YearBuilt :1999 | BldgSqFt: 2717 | Lot SqFt: 7741 | Acres: 0.1777 |
| \#15 |  |  |  |  |  |
| Owner | : Chan John H Trustee |  |  | Parcel \# | : 01858877 |
| Site | : 2250 Crestview Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA09700 |
| Mail | : 2250 Crestview Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$7,155 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$540,396 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 09/28/2001 | Sale Price | : \$85,000 | Doc \# | : 2001-079398 |
| Prior Sale Date |  | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 91\|Y|182048 |  |  | Market Land | : \$224,306 |
|  |  |  |  | Mkt Structure | : \$316,090 |
| Bedrooms: 3 | Bath: 2.5 | YearBuilt :2001 | BldgSqFt: 2933 | Lot SqFt: 9492 | Acres: 0.2179 |

## WFG NATIONAL TITLE: FARM REPORT / Clackamas (OR)

\#16

| Owner | : Christians, Robert J |  |  |  | Parcel \# | : 01746105 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 2110 Alpine Dr West Linn 97068 |  |  |  | Ref Parcel \# | : 21E35BA03800 |
| Mail | : 2110 Alpine Dr West Linn OR 97068 |  |  |  | 17-18 Taxes | : \$8,889 |
| Land Use | : 101 Residential land improved |  |  |  | Market Total | : \$627,363 |
| MapGrid | : 686-G7 |  |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 09/07/2011 | Sale Price | : |  | Doc \# | : 0000050837 |
| Prior Sale Date |  | Prior Sale P |  |  | Prior Doc \# | : |
| Legal |  |  |  |  | Market Land | : \$198,633 |
|  | : 3307 RIDGE VIEW EST PH 1 LT 32\|Y|182048 |  |  |  | Mkt Structure | : \$428,730 |
| Bedrooms: 0 | Bath: 2.5 | YearBuilt :1998 | BldgSqFt: | Lot SqFt: | 7553 | Acres: 0.1734 |
| \#17 |  |  |  |  |  |  |
| Owner | : City Of West Linn |  |  |  | Parcel \# | : 01859028 |
| Site | : null |  |  |  | Ref Parcel \# | : 21E35BA11200 |
| Mail | : 22500 Salamo Rd \#600 West Linn OR 97068 |  |  |  | 17-18 Taxes | : |
| Land Use | : 100 Residential land, vacant |  |  |  | Market Total | : \$6,718 |
| MapGrid | : 686-G7 |  |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 05/01/1998 | Sale Price |  |  | Doc \# | : 1998-047123 |
| Prior Sale Date |  | Prior Sale P | : |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 TR G DEDICATED TO CITY OF W |  |  |  | Market Land | : \$6,718 |
|  | : |  |  |  | Mkt Structure | : |
| Bedrooms: 0 | Bath: 0 | YearBuilt :0 | BldgSqFt: 0 | Lot SqFt: 7928 |  | Acres: 0.182 |
| \#18 |  |  |  |  |  |  |
| Owner | : City Of West Linn |  |  |  | Parcel \# | : 01859037 |
| Site | : null |  |  |  | Ref Parcel \# | : 21E35BA11300 |
| Mail | : 22500 Salamo Rd \#600 West Linn OR 97068 |  |  |  | 17-18 Taxes | : |
| Land Use | : 100 Residential land, vacant |  |  |  | Market Total | : \$5,742 |
| MapGrid | : 686-H7 |  |  |  | Millage Rate | : 18.7492 |
| Sale Date | Sale Price |  |  |  | Doc \# | : |
| Prior Sale Date |  | Prior Sale |  |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 TR F DEDICATED TO CITY OF W |  |  |  | Market Land | : \$5,742 |
|  | : 0 |  |  |  | Mkt Structure | . |
| Bedrooms: 0 | Bath: 0 | YearBuilt :0 | BldgSqFt: 0 | Lot SqFt: 4404 |  | cres: 0.1011 |

\#19

| Owner | : City Of West Linn | Parcel \# | : 01859055 |
| :---: | :---: | :---: | :---: |
| Site | : null | Ref Parcel \# | : 21E35BA11500 |
| Mail | : 22500 Salamo Rd \#600 West Linn OR 97068 | 17-18 Taxes | : |
| Land Use | : 100 Residential land, vacant | Market Total | : \$5,470 |
| MapGrid | : 686-G7 | Millage Rate | : 18.7492 |
| Sale Date | : 05/01/1998 Sale Price | Doc \# | : 1998-047123 |
| Prior Sale Date | Prior Sale Price | Prior Doc \# |  |
| Legal | : 3499 RIDGE VIEW EST \#2 TR J DEDICATED TO CITY OF W | Market Land | : \$5,470 |
|  |  | Mkt Structure |  |

Bedrooms: $0 \quad$ Bath: $0 \quad$ YearBuilt :0 BldgSqFt: $0 \quad$ Lot SqFt: $1564 \quad$ Acres: 0.0359

| Owner | : City Of West Linn |  |  |  | Parcel \# | : 01859064 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : null |  |  |  | Ref Parcel \# | : 21E35BA11600 |
| Mail | : 22500 Salamo Rd \#600 West Linn OR 97068 |  |  |  | 17-18 Taxes | : |
| Land Use | : 100 Residential land, vacant |  |  |  | Market Total | : |
| MapGrid | : 686-G7 |  |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 05/01/1998 | Sale Price | : |  | Doc \# | : 1998-047123 |
| Prior Sale Date |  | : Prior Sale Price |  |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 TR K\|Y|182048 |  |  |  | Market Land |  |
|  |  |  |  |  | Mkt Structure | : |
| Bedrooms: 0 | Bath: 0 | YearBuilt :0 | BldgSqFt: 0 | Lot SqFt: 1376 |  | : 0.0316 |

## WFG NATIONAL TITLE: FARM REPORT / Clackamas (OR)

| Owner | : City Of West Linn |  |  | Parcel \# | : 05029770 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 2145 Fircrest Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA20512 |
| Mail | : 22500 Salamo Rd West Linn OR 97068 |  |  | 17-18 Taxes | : |
| Land Use | : 100 Residential land, vacant |  |  | Market Total | : \$31,423 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 06/30/2015 | Sale Price |  | Doc \# | : 2015-044764 |
| Prior Sale Date |  | Prior Sale Price | : | Prior Doc \# | : |
| Legal | : Subdivision WEATHERHILL 4424 TRACT A\|Y|182048 |  |  | Market Land | : \$31,423 |
|  |  |  |  | Mkt Structure | : |
| Bedrooms: 0 | Bath: 0 | YearBuilt :0 | BldgSqFt: 0 | Lot SqFt: 5445 | Acres: 0.125 |
| \#22 |  |  |  |  |  |
| Owner | : Cook, Larry |  |  | Parcel \# | : 00406705 |
| Site | : 1703 Killarney Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BB10500 |
| Mail | : 1703 Killarney Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$9,064 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$683,251 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 02/01/1990 | Sale Price | : \$27,000 | Doc \# | : 0000010078 |
| Prior Sale Date |  | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 2350 GREEN HILLS EST IV LT 13 BLK 3\|Y|182048 |  |  | Market Land | : \$165,891 |
|  |  |  |  | Mkt Structure | : \$517,360 |
| Bedrooms: 3 | Bath: 2 | YearBuilt :1991 | BldgSqFt: 3920 | Lot SqFt: 10001 | Acres: 0.2296 |
| \#23 |  |  |  |  |  |
| Owner | : Corry, Thomas B |  |  | Parcel \# | : 01858644 |
| Site | : 2130 Fircrest Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA07400 |
| Mail | : 2130 Fircrest Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$12,076 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$888,946 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 06/17/2005 | Sale Price | : \$750,000 | Doc \# | : 0000056107 |
| Prior Sale Date |  | Prior Sale Price | : | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 68\|Y|182048 |  |  | Market Land | : \$224,306 |
|  | : |  |  | Mkt Structure | : \$664,640 |
| Bedrooms: 4 | Bath: 3.5 | YearBuilt :2001 | BldgSqFt: 4992 | Lot SqFt: 7610 | Acres: 0.1747 |
| \#24 |  |  |  |  |  |
| Owner | : Craver, Matthew R |  |  | Parcel \# | : 05029762 |
| Site | : 2179 Satter St West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA20504 |
| Mail | : 2179 Satter St West Linn OR 97068 |  |  | 17-18 Taxes | : \$3,488 |
| Land Use | : 100 Residential land, vacant |  |  | Market Total | : \$276,112 |
| MapGrid | : 686-H7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 08/18/2017 | Sale Price | : \$689,995 | Doc \# | : 0000056653 |
| Prior Sale Date | : 12/13/2016 | Prior Sale Price | : \$980,000 | Prior Doc \# | : 0000085604 |
| Legal | : Subdivision WEATHERHILL 4424 LT 4\|Y|182048 |  |  | Market Land | : \$276,112 |
|  |  |  |  | Mkt Structure | : |
| Bedrooms: 6 | Bath: 4 | YearBuilt :0 | BldgSqFt: 3290 | Lot SqFt: 7048 | Acres: 0.1618 |
| \#25 |  |  |  |  |  |
| Owner | : Dautremont, Neil J |  |  | Parcel \# | : 01858430 |
| Site | : 23008 Bland Cir West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA05300 |
| Mail | : 23008 Bland Cir West Linn OR 97068 |  |  | 17-18 Taxes | : \$11,037 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$811,796 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 10/30/2000 | Sale Price | : \$470,000 | Doc \# | : 2000-070678 |
| Prior Sale Date |  | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 47\|Y|182048 |  |  | Market Land | : \$226,536 |
|  |  |  |  | Mkt Structure | : \$585,260 |
| Bedrooms: 5 | Bath: 4 | YearBuilt :1999 | BldgSqFt: 4176 | Lot SqFt: 8777 | Acres: 0.2015 |

## WFG NATIONAL TITLE: FARM REPORT / Clackamas (OR)

| Owner | : Davis, Brian F |  |  | Parcel \# | : 00406554 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 1736 Killarney Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BB09000 |
| Mail | : 1736 Killarney Dr West Linn OR 97068 |  |  | 17-18 Taxes | \$6,577 |
| Land Use | : 101 Residential land improved |  |  | Market Total | \$501,491 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 07/22/2014 | Sale Price | : \$487,000 | Doc \# | : 0000035460 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 2350 GREEN HILLS EST IV LT 57 BLK 2\|Y|182048 |  |  | Market Land | \$165,891 |
|  | : |  |  | Mkt Structure | \$335,600 |
| Bedrooms: 4 | Bath: 3 | YearBuilt :1986 | BldgSqFt: 2936 | Lot SqFt: 11448 | Acres: 0.2628 |
| \#27 |  |  |  |  |  |
| Owner | : Emerick, Erik E |  |  | Parcel \# | : 01858733 |
| Site | : 2235 Crestview Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA08300 |
| Mail | : 2235 Crestview Dr West Linn OR 97068 |  |  | 17-18 Taxes | \$8,288 |
| Land Use | : 101 Residential land improved |  |  | Market Total | \$610,563 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 05/20/2013 | Sale Price | \$490,000 | Doc \# | 0000034160 |
| Prior Sale Date |  | Prior Sale Price |  | Prior Doc \# |  |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 77\|Y|182048 |  |  | Market Land | \$198,633 |
|  | : |  |  | Mkt Structure | \$411,930 |
| Bedrooms: 5 | Bath: 3 | YearBuilt :2002 | BldgSqFt: 3922 | Lot SqFt: 7810 | Acres: 0.1793 |
| \#28 |  |  |  |  |  |
| Owner | : Floyd, Daniel |  |  | Parcel \# | : 05029760 |
| Site | : 2148 Satter St West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA20502 |
| Mail | : 2148 Satter St West Linn OR 97068 |  |  | 17-18 Taxes | \$3,247 |
| Land Use | : 100 Residential land, vacant |  |  | Market Total | \$257,098 |
| MapGrid | : 686-H7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 09/18/2017 | Sale Price | : \$699,995 | Doc \# | : 0000063906 |
| Prior Sale Date | : 12/13/2016 | Prior Sale Price | : \$980,000 | Prior Doc \# | : 0000085604 |
| Legal | : Subdivision WEATHERHILL 4424 LT 2\|Y|182048 |  |  | Market Land | \$257,098 |
|  | : |  |  | Mkt Structure | : |
| Bedrooms: 4 | Bath: 3.5 | YearBuilt : 0 | BldgSqFt: 3716 | Lot SqFt: 7070 | Acres: 0.1623 |
| \#29 |  |  |  |  |  |
| Owner | : Fogle, David M |  |  | Parcel \# | : 05029768 |
| Site | : 2125 Satter St West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA20510 |
| Mail | : 2125 Satter St West Linn OR 97068 |  |  | 17-18 Taxes | \$8,688 |
| Land Use | : 101 Residential land improved |  |  | Market Total | \$688,717 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 07/16/2015 | Sale Price | : \$259,000 | Doc \# | : 2015-047011 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# |  |
| Legal | : Subdivision WEATHERHILL 4424 LT 10\|Y|182048 |  |  | Market Land | \$283,037 |
|  |  |  |  | Mkt Structure | \$405,680 |
| Bedrooms: 3 | Bath: 3.5 | YearBuilt :2016 | BldgSqFt: 2923 | Lot SqFt: 7436 | Acres: 0.1707 |
| \#30 |  |  |  |  |  |
| Owner | : Frankle, David S |  |  | Parcel \# | : 00406732 |
| Site | : 1755 Killarney Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BB10800 |
| Mail | : 1755 Killarney Dr West Linn OR 97068 |  |  | 17-18 Taxes | \$6,549 |
| Land Use | : 101 Residential land improved |  |  | Market Total | \$493,291 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 12/12/2012 | Sale Price | : \$319,000 | Doc \# | : 0000081945 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 2350 GREEN HILLS EST IV LT 16 BLK 3\|Y|182048 |  |  | Market Land | \$165,891 |
|  |  |  |  | Mkt Structure | : \$327,400 |
| Bedrooms: 3 | Bath: 2.5 | YearBuilt :1990 | BldgSqFt: 2742 | Lot SqFt: 10010 | Acres: 0.2298 |

## WFG NATIONAL TITLE: FARM REPORT / Clackamas (OR)

\#31

| Owner | : Gabel, Donald W |  |  | Parcel \# | : 01858724 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 2225 Crestview Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA08200 |
| Mail | : 2225 Crestview Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$7,660 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$565,553 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 04/30/2004 | Sale Price | : \$415,000 | Doc \# | : 0000038658 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 76\|Y|182048 |  |  | Market Land | : \$198,633 |
|  | : |  |  | Mkt Structure | : \$366,920 |
| Bedrooms: 4 | Bath: 2.5 | YearBuilt :2002 | BldgSqFt: 3334 | Lot SqFt: 7471 | Acres: 0.1715 |
| \#32 |  |  |  |  |  |
| Owner | : Gardner, James |  |  | Parcel \# | : 05029763 |
| Site | : 2167 Satter St West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA20505 |
| Mail | : 2167 Satter St West Linn OR 97068 |  |  | 17-18 Taxes | : \$8,034 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$636,796 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 06/16/2017 | Sale Price | : \$789,900 | Doc \# | : 0000040303 |
| Prior Sale Date |  | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : Subdivision WEATHERHILL 4424 LT 5\|Y|182048 |  |  | Market Land | : \$341,006 |
|  | : |  |  | Mkt Structure | : \$295,790 |
| Bedrooms: 4 | Bath: 3.5 | YearBuilt :2016 | BldgSqFt: 3143 | Lot SqFt: 7022 | Acres: 0.1612 |
| \#33 |  |  |  |  |  |
| Owner | : Germain, John |  |  | Parcel \# | : 01746089 |
| Site | : 2130 Alpine Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA03600 |
| Mail | : 2130 Alpine Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$8,520 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$625,663 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 08/28/2002 | Sale Price | : \$370,000 | Doc \# | : 2002-079885 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# |  |
| Legal | : 3307 RIDGE VIEW EST PH 1 LT 30\|Y|182048 |  |  | Market Land | : \$198,633 |
|  |  |  |  | Mkt Structure | : \$427,030 |
| Bedrooms: 3 | Bath: 2.5 | YearBuilt :1998 | BldgSqFt: 2953 | Lot SqFt: 7275 | Acres: 0.167 |

\#34

| Owner | : Grant, Cory Marog |  |  | Parcel \# | : 05029764 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 2155 Satter St West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA20506 |
| Mail | : 2155 Satter St West Linn OR 97068 |  |  | 17-18 Taxes | : \$10,093 |
| Land Use | : 101 Residential land improved |  |  | Market Total | \$800,225 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 09/19/2017 | Sale Price | : \$726,000 | Doc \# | : 0000063929 |
| Prior Sale Date | : | Prior Sale Price | : | Prior Doc \# |  |
| Legal | : Subdivision WEATHERHILL 4424 LT 6\|Y|182048 |  |  | Market Land | \$341,005 |
|  |  |  |  | Mkt Structure | : \$459,220 |
| Bedrooms: 5 | Bath: 3.5 | YearBuilt :2016 | BldgSqFt: 3396 | qFt: 7039 | Acres: 0.1616 |


| Owner | : Hall, Mark A | Parcel \# | : 00406698 |
| :---: | :---: | :---: | :---: |
| Site | : 1697 Killarney Dr West Linn 97068 | Ref Parcel \# | : 21E35BB10400 |
| Mail | : 1697 Killarney Dr West Linn OR 97068 | 17-18 Taxes | : \$5,952 |
| Land Use | : 101 Residential land improved | Market Total | : \$489,201 |
| MapGrid | : 686-G7 | Millage Rate | : 18.7492 |
| Sale Date | : 05/23/2017 Sale Price | Doc \# | : 2017-035778 |
| Prior Sale Date | Prior Sale Price | Prior Doc \# | : |
| Legal | : 2350 GREEN HILLS EST IV LT 12 BLK 3\|Y|182048 | Market Land | : \$165,891 |
|  | : Yearuit:1978 | Mkt Structure | : \$323,310 |
| Bedrooms: 3 | Bath: 2 YearBuilt :1978 BldgSqFt: 1987 | t: 10267 | Acres: 0.2357 |

## WFG NATIONAL TITLE: FARM REPORT / Clackamas (OR)

\#36

| Owner | : Haney, Steven J |  |  | Parcel \# | : 01858706 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 2211 Crestview Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA08000 |
| Mail | : 2211 Crestview Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$6,806 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$503,253 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 12/08/2014 | Sale Price | : \$507,000 | Doc \# | : 0000062773 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 74\|Y|182048 |  |  | Market Land | : \$198,633 |
|  | : |  |  | Mkt Structure | : \$304,620 |
| Bedrooms: 4 | Bath: 3 | YearBuilt :2003 | BldgSqFt: 2893 | Lot SqFt: 7018 | Acres: 0.1611 |
| \#37 |  |  |  |  |  |
| Owner | : Hardy, David L |  |  | Parcel \# | : 00405350 |
| Site | : 22915 S Weatherhill Rd West Linn 97068 |  |  | Ref Parcel \# | : 21E35B 00101 |
| Mail | : 22915 S Weatherhill Rd West Linn OR 97068 |  |  | 17-18 Taxes | : \$6,895 |
| Land Use | : 541 Non EFU farmland improved |  |  | Market Total | : \$913,731 |
| MapGrid | : 686-H7 |  |  | Millage Rate | : 17.5004 |
| Sale Date | : 09/27/2013 | Sale Price | : | Doc \# | : 2013-068372 |
| Prior Sale Date | : | Prior Sale Price | : | Prior Doc \# | : |
| Legal | : 304 BLAND AC PT LT 9\|Y|182048 |  |  | Market Land | : \$560,511 |
|  |  |  |  | Mkt Structure | : \$353,220 |
| Bedrooms: 3 | Bath: 3.5 | YearBuilt :1984 | BldgSqFt: 3960 | Lot SqFt: 163259 | Acres: 3.7479 |

\#38

\#39

\#40


## WFG NATIONAL TITLE: FARM REPORT / Clackamas (OR)

\#41

| Owner | : Houlihan, Timothy Jr |  |  | Parcel \# | : 01858369 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 1990 Alpine Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA04600 |
| Mail | : 1990 Alpine Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$10,236 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$752,703 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 06/24/2015 | Sale Price | : \$659,900 | Doc \# | : 0000040454 |
| Prior Sale Date | : | Prior Sale Pric |  | Prior Doc \# | : |
| Legal | : Subdivision RIDGE VIEW EST \#2 LT 40 PT LT 41 3499\| |  |  | Market Land | : \$198,633 |
|  | : |  |  | Mkt Structure | : \$554,070 |
| Bedrooms: 5 | Bath: 4.5 | YearBuilt :1999 | BldgSqFt: 4968 | Lot SqFt: 10511 | Acres: 0.2413 |
| \#42 |  |  |  |  |  |
| Owner | : Howard, Michael J |  |  | Parcel \# | : 01858742 |
| Site | : 2245 Crestview Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA08400 |
| Mail | : 2245 Crestview Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$7,680 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$569,303 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 12/17/2015 | Sale Price | \$510,000 | Doc \# | : 0000083137 |
| Prior Sale Date | : 12/17/2015 | Prior Sale Pric |  | Prior Doc \# | : 0000083136 |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 78\|Y|182048 |  |  | Market Land | : \$198,633 |
|  | : |  |  | Mkt Structure | : \$370,670 |
| Bedrooms: 4 | Bath: 2.5 | YearBuilt :2002 | BldgSqFt: 3466 | Lot SqFt: 8594 | Acres: 0.1973 |
| \#43 |  |  |  |  |  |
| Owner | : Huberty, David P |  |  | Parcel \# | : 01858653 |
| Site | : 2120 Fircrest Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA07500 |
| Mail | : 2120 Fircrest Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$12,650 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$904,495 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 09/28/2007 | Sale Price | : \$996,000 | Doc \# | : 0000083858 |
| Prior Sale Date | : | Prior Sale Pric |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 69\|Y|182048 |  |  | Market Land | : \$310,245 |
|  |  |  |  | Mkt Structure | : \$594,250 |
| Bedrooms: 4 | Bath: 4 | YearBuilt :1988 | BldgSqFt: 4805 | Lot SqFt: 17799 | Acres: 0.4086 |

\#44

| Owner | : Huberty, David P |  |  | Parcel \# | : 01858662 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 2110 Fircrest Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA07600 |
| Mail | : 2120 Fircrest Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$1,805 |
| Land Use | : 100 Residential land, vacant |  |  | Market Total | : \$167,418 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 09/28/2007 | Sale Price | \$996,000 | Doc \# | : 0000083858 |
| Prior Sale Date | : | Prior Sale P |  | Prior Doc \# |  |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 70\|Y|182048 |  |  | Market Land | \$167,418 |
|  |  |  |  | Mkt Structure |  |
| Bedrooms: 0 | Bath: 0 | YearBuilt :0 | BldgSqFt: 0 |  | es: 0.2052 |


| Owner | : Hwang, Amanda Y |  |  | Parcel \# | : 01858699 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 23043 Bland Cir West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA07900 |
| Mail | : 23043 Bland Cir West Linn OR 97068 |  |  | 17-18 Taxes | : \$8,476 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$625,385 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 02/28/2013 | Sale Price | : \$432,000 | Doc \# | : 0000014144 |
| Prior Sale Date | : 01/10/2013 | Prior Sale Price | : \$446,000 | Prior Doc \# | : 0000001938 |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 73\|Y|182048 |  |  | Market Land | : \$194,175 |
|  |  |  |  | Mkt Structure | : \$431,210 |
| Bedrooms: 4 | Bath: 2.5 | YearBuilt :2001 | BldgSqFt: 3375 | t: 7466 | Acres: 0.1714 |

## WFG NATIONAL TITLE: FARM REPORT / Clackamas (OR)

| Owner | : Jensen, Theron K |  |  | Parcel \# | : 01858715 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 2215 Crestview Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA08100 |
| Mail | : 2215 Crestview Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$6,891 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$521,193 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 06/08/2012 | Sale Price | : \$322,000 | Doc \# | : 0000036139 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 75\|Y|182048 |  |  | Market Land | : \$198,633 |
|  | : |  |  | Mkt Structure | : \$322,560 |
| Bedrooms: 3 | Bath: 2 | YearBuilt :1999 | BldgSqFt: 2249 | Lot SqFt: 7018 | Acres: 0.1611 |
| \#47 |  |  |  |  |  |
| Owner | : Jones, Michael K |  |  | Parcel \# | : 01858671 |
| Site | : 23025 Bland Cir West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA07700 |
| Mail | : 23025 Bland Cir West Linn OR 97068 |  |  | 17-18 Taxes | : \$6,565 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$524,553 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 08/03/2017 | Sale Price | : \$515,000 | Doc \# | : 0000053150 |
| Prior Sale Date |  | Prior Sale Price |  | Prior Doc \# |  |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 71\|Y|182048 |  |  | Market Land | : \$198,633 |
|  | : |  |  | Mkt Structure | : \$325,920 |
| Bedrooms: 3 | Bath: 2.5 | YearBuilt :1999 | BldgSqFt: 2345 | Lot SqFt: 8054 | Acres: 0.1849 |
| \#48 |  |  |  |  |  |
| Owner | : Keller, Douglas |  |  | Parcel \# | : 05029769 |
| Site | : 2101 Satter St West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA20511 |
| Mail | : 2101 Satter St West Linn OR 97068 |  |  | 17-18 Taxes | : \$8,924 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$705,354 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 08/19/2016 | Sale Price | : \$689,900 | Doc \# | : 0000056448 |
| Prior Sale Date |  | : Prior Sale Price |  | Prior Doc \# | : |
| Legal | : Subdivision WEATHERHILL 4424 LT 11\|Y|182048 |  |  | Market Land | : \$286,744 |
|  | : |  |  | Mkt Structure | : \$418,610 |
| Bedrooms: 4 | Bath: 3 | YearBuilt :2015 | BldgSqFt: 2907 | Lot SqFt: 7057 | Acres: 0.162 |
| \#49 |  |  |  |  |  |
| Owner | : Knight, Brooke |  |  | Parcel \# | : 01858485 |
| Site | : 2125 Alpine Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA05800 |
| Mail | : 2125 Alpine Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$8,546 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$626,023 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 04/27/2011 | Sale Price |  | Doc \# | : 2011-025582 |
| Prior Sale Date | : Prior Sale Price |  |  | Prior Doc \# |  |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 52\|Y|182048 |  |  | Market Land | : \$196,403 |
|  | : |  |  | Mkt Structure | : \$429,620 |
| Bedrooms: 3 | Bath: 2.5 | YearBuilt :2001 | BldgSqFt: 3623 | Lot SqFt: 7980 | Acres: 0.1832 |
| \#50 |  |  |  |  |  |
| Owner | : Koessler, James A |  |  | Parcel \# | : 01858412 |
| Site | : 1940 Alpine Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA05100 |
| Mail | : 1940 Alpine Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$8,620 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$635,876 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 04/24/2015 | Sale Price | : \$569,000 | Doc \# | : 0000023390 |
| Prior Sale Date |  | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 45\|Y|182048 |  |  | Market Land | : \$224,306 |
|  |  |  |  | Mkt Structure | : \$411,570 |
| Bedrooms: 3 | Bath: 3 | YearBuilt :2001 | BldgSqFt: 2551 | Lot SqFt: 8599 | Acres: 0.1974 |

## WFG NATIONAL TITLE: FARM REPORT / Clackamas (OR)

\#51

| Owner | : Lorenz, William C |  |  | Parcel \# | : 05029759 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 2100 Satter St West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA20501 |
| Mail | : 2100 Satter St West Linn OR 97068 |  |  | 17-18 Taxes | : \$10,867 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$861,587 |
| MapGrid | : 686-H7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 02/01/2016 | Sale Price | : | Doc \# | : 2016-005968 |
| Prior Sale Date | : Prior Sale Price |  |  | Prior Doc \# |  |
| Legal | : Subdivision WEATHERHILL 4424 LT 1\|Y|182048 |  |  | Market Land | \$289,157 |
|  | : |  |  | Mkt Structure | : \$572,430 |
| Bedrooms: 5 | Bath: 3.5 | YearBuilt :2016 | BldgSqFt: 4694 | Lot SqFt: 7671 | Acres: 0.1761 |
| \#52 |  |  |  |  |  |
| Owner | : Luo, Lin |  |  | Parcel \# | : 01858886 |
| Site | : 2220 Crestview Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA09800 |
| Mail | : 2220 Crestview Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$10,183 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$749,746 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 08/01/2014 | Sale Price | : \$729,500 | Doc \# | : 0000038352 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 92\|Y|182048 |  |  | Market Land | \$226,536 |
|  |  |  |  | Mkt Structure | : \$523,210 |
| Bedrooms: 5 | Bath: 4 | YearBuilt :2002 | BldgSqFt: 4521 | Lot SqFt: 9561 | Acres: 0.2195 |

\#53

| Owner | : Malcolm, Stacee R Living Trust |  |  | Parcel \# | : 01858617 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 2135 Fircrest Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA07100 |
| Mail | : 2135 Fircrest Dr West Linn OR 97068 |  |  | 17-18 Taxes | \$8,946 |
| Land Use | : 101 Residential land improved |  |  | Market Total | \$658,003 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 05/21/2012 | Sale Price |  | Doc \# | 2012-032796 |
| Prior Sale Date | : | Prior Sale Pric |  | Prior Doc \# |  |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 65\|Y|182048 |  |  | Market Land | \$198,633 |
|  | : |  |  | Mkt Structure | \$459,370 |
| Bedrooms: 4 | Bath: 2.5 | YearBuilt :2002 | BldgSqFt: 4014 | Ft: 13290 | Acres: 0.3051 |

\#54


| Owner | : Maslen, Bobby Lynn |  |  | Parcel \# | : 00391711 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : null |  |  | Ref Parcel \# | : 21E26C 01501 |
| Mail | : 12205 SW Tualatin Rd Ste 240 Tualatin OR 97062 |  |  | 17-18 Taxes | : \$1,970 |
| Land Use | : 100 Residential land, vacant |  |  | Market Total | : \$215,411 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 12/29/2004 | Sale Price |  | Doc \# | : 2004-119104 |
| Prior Sale Date | : | Prior Sale P |  | Prior Doc \# |  |
| Legal | : 304 BLAND ACRES PT LT 8\|Y|182048 |  |  | Market Land | \$215,411 |
|  |  |  |  | Mkt Structure | : |
| Bedrooms: 0 | Bath: 0 | YearBuilt :0 | BldgSqFt: 0 | 582 | res: 0.9546 |

## WFG NATIONAL TITLE: FARM REPORT / Clackamas (OR)

| Owner | : Maslen, Bobby Lynn |  |  | Parcel \# | : 00391702 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 22910 Weatherhill Rd West Linn 97068 |  |  | Ref Parcel \# | : 21E26C 01500 |
| Mail | : 12205 SW Tualatin Rd Ste 240 Tualatin OR 97062 |  |  | 17-18 Taxes | : \$7,522 |
| Land Use | : 401 Tract land improved |  |  | Market Total | : \$729,354 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 12/29/2004 | Sale Price | : | Doc \# | : 2004-119104 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 304 BLAND ACRES PT LT 8\|Y|182048 |  |  | Market Land | : \$601,284 |
|  | : |  |  | Mkt Structure | : \$128,070 |
| Bedrooms: 3 | Bath: 1 | YearBuilt :1925 | BldgSqFt: 1766 | Lot SqFt: 154006 | Acres: 3.5355 |
| \#57 |  |  |  |  |  |
| Owner | : McMath, John M |  |  | Parcel \# | : 00406723 |
| Site | : 1737 Killarney Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BB10700 |
| Mail | : 1737 Killarney Dr West Linn OR 97068 |  |  | 17-18 Taxes | \$5,485 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$428,581 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 05/31/1994 | Sale Price | : \$179,000 | Doc \# | : 0000044910 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 2350 GREEN HILLS EST IV LT 15 BLK 3\|Y|182048 |  |  | Market Land | : \$165,891 |
|  | : |  |  | Mkt Structure | : \$262,690 |
| Bedrooms: 3 | Bath: 2.5 | YearBuilt :1979 | BldgSqFt: 1909 | Lot SqFt: 10032 | Acres: 0.2303 |
| \#58 |  |  |  |  |  |
| Owner | : McMurray, Andrew |  |  | Parcel \# | : 01858421 |
| Site | : 23004 Bland Cir West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA05200 |
| Mail | : 23004 Bland Cir West Linn OR 97068 |  |  | 17-18 Taxes | : \$8,631 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$638,826 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 03/05/2018 | Sale Price | : \$600,000 | Doc \# | : 0000013688 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 46\|Y|182048 |  |  | Market Land | : \$226,536 |
|  | : |  |  | Mkt Structure | : \$412,290 |
| Bedrooms: 5 | Bath: 2.5 | YearBuilt :1999 | BldgSqFt: 3955 | Lot SqFt: 9696 | Acres: 0.2226 |
| \#59 |  |  |  |  |  |
| Owner | : Mitchell, Charles E Jr |  |  | Parcel \# | : 01745954 |
| Site | : 2000 Alpine Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA02300 |
| Mail | : 2000 Alpine Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$7,855 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$574,433 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 03/23/1998 | Sale Price | : \$347,170 | Doc \# | :0000023002 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 3307 RIDGE VIEW EST PH 1 LT 17\|Y|182048 |  |  | Market Land | \$198,633 |
|  | : |  |  | Mkt Structure | \$375,800 |
| Bedrooms: 3 | Bath: 2.5 | YearBuilt :1997 | BldgSqFt: 3016 | Lot SqFt: 9714 | Acres: 0.223 |
| \#60 |  |  |  |  |  |
| Owner | : Moore, Margaret K |  |  | Parcel \# | : 01858449 |
| Site | : 23012 Bland Cir West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA05400 |
| Mail | : 23012 Bland Cir West Linn OR 97068 |  |  | 17-18 Taxes | : \$9,982 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$694,916 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 01/16/2014 | Sale Price |  | Doc \# | : 2014-004209 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 48\|Y|182048 |  |  | Market Land | : \$224,306 |
|  |  |  |  | Mkt Structure | : \$470,610 |
| Bedrooms: 5 | Bath: 3.5 | YearBuilt :2002 | BldgSqFt: 4191 | Lot SqFt: 9004 | Acres: 0.2067 |

## WFG NATIONAL TITLE: FARM REPORT / Clackamas (OR)

\#61

| Owner | : Mreen, Richard |  |  | Parcel \# | : 01858902 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 23049 Bland Cir West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA10000 |
| Mail | : 23049 Bland Cir West Linn OR 97068 |  |  | 17-18 Taxes | : \$7,980 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$586,503 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 06/11/2015 | Sale Price |  | Doc \# | : 2015-037991 |
| Prior Sale Date | : Prior Sale Price |  |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 94\|Y|182048 |  |  | Market Land | : \$198,633 |
|  | : ${ }^{\text {a }}$ |  |  | Mkt Structure | : \$387,870 |
| Bedrooms: 4 | Bath: 2.5 | YearBuilt :2000 | BldgSqFt: 2786 | Lot SqFt: 7732 | Acres: 0.1775 |
| \#62 |  |  |  |  |  |
| Owner | : Muresan, Emil |  |  | Parcel \# | : 01858500 |
| Site | : 2145 Alpine Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA06000 |
| Mail | : PO Box 537 West Linn OR 97068 |  |  | 17-18 Taxes | : \$8,911 |
| Land Use | : 101 Residential land improved |  |  | Market Total | \$650,463 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 12/20/1999 | Sale Price |  | Doc \# | : 0000115860 |
| Prior Sale Date |  | Prior Sale Price |  | Prior Doc \# | : |
| Legal |  |  |  | Market Land | : \$198,633 |
|  | : 3499 RIDGE VIEW EST \#2 LT 54\|Y|182048 |  |  | Mkt Structure | : \$451,830 |
| Bedrooms: 3 | Bath: 2.5 | YearBuilt :2000 | BldgSqFt: 2877 | Lot SqFt: 7083 | Acres: 0.1626 |

\#63

\#64


| Owner | : Nichols, Jon R |  |  | Parcel \# | : 01858608 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 2125 Fircrest Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA07000 |
| Mail | : 2125 Fircrest Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$8,542 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$628,576 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 08/15/2013 | Sale Price | : \$531,000 | Doc \# | : 0000058916 |
| Prior Sale Date | : | Prior Sale |  | Prior Doc \# |  |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 64\|Y|182048 |  |  | Market Land | : \$224,306 |
|  | : |  |  | Mkt Structure | : \$404,270 |
| Bedrooms: 4 | Bath: 2.5 | YearBuilt : | Bl | Lot SqFt: 8729 | Acres: 0.2004 |

## WFG NATIONAL TITLE: FARM REPORT / Clackamas (OR)

| Owner | : Nilsen, John |  |  | Parcel \# | : 00405396 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 23010 Bland Cir West Linn 97068 |  |  | Ref Parcel \# | : 21E35B 00400 |
| Mail | : 23010 Bland Cir West Linn OR 97068 |  |  | 17-18 Taxes | : \$11,351 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$885,082 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 04/05/1995 | Sale Price | : \$380,000 | Doc \# | : 0000019735 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 304 BLAND ACRES PT LT 24\|Y|182048 |  |  | Market Land | : \$377,212 |
|  | : |  |  | Mkt Structure | : \$507,870 |
| Bedrooms: 4 | Bath: 2.5 | YearBuilt :1991 | BldgSqFt: 3267 | Lot SqFt: 68537 | Acres: 1.5734 |
| \#67 |  |  |  |  |  |
| Owner | : Obrien, Richard Martin II |  |  | Parcel \# | : 01858314 |
| Site | : 2155 Alpine Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA04100 |
| Mail | : 2155 Alpine Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$7,728 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$575,263 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 04/16/2013 | Sale Price |  | Doc \# | : 2013-028199 |
| Prior Sale Date |  | Prior Sale Price |  | Prior Doc \# | : |
| Legal |  |  |  | Market Land | \$198,633 |
|  | : 3499 RIDGE VIEW EST \#2 LT 35\|Y|182048 |  |  | Mkt Structure | \$376,630 |
| Bedrooms: 3 | Bath: 2.5 | YearBuilt :1999 | BldgSqFt: 2954 | Lot SqFt: 8999 | Acres: 0.2066 |
| \#68 |  |  |  |  |  |
| Owner | : Oliveros, Milette Balbin |  |  | Parcel \# | : 05029767 |
| Site | : 2113 Satter St West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA20509 |
| Mail | : 2113 Satter St West Linn OR 97068 |  |  | 17-18 Taxes | : \$9,607 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$761,644 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 12/02/2016 | Sale Price | : \$794,900 | Doc \# | : 0000083149 |
| Prior Sale Date |  | : Prior Sale Price |  | Prior Doc \# | : |
| Legal | : Subdivision WEATHERHILL 4424 LT 9\|Y|182048 |  |  | Market Land | : \$319,764 |
|  |  |  |  | Mkt Structure | : \$441,880 |
| Bedrooms: 4 | Bath: 3.5 | YearBuilt :2016 | BldgSqFt: 3224 | Lot SqFt: 12510 | Acres: 0.2872 |
| \#69 |  |  |  |  |  |
| Owner | : Percin, John J Sr |  |  | Parcel \# | : 01858537 |
| Site | : 23036 Bland Cir West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA06300 |
| Mail | : 23036 Bland Cir West Linn OR 97068 |  |  | 17-18 Taxes | \$11,332 |
| Land Use | : 101 Residential land improved |  |  | Market Total | \$840,536 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 07/05/2000 | Sale Price | : \$529,500 | Doc \# | : 0000043735 |
| Prior Sale Date | : Prior Sale Price |  |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 57\|Y|182048 |  |  | Market Land | : \$226,536 |
|  | : ${ }^{\text {a }}$ |  |  | Mkt Structure | : \$614,000 |
| Bedrooms: 5 | Bath: 3.5 | YearBuilt :2000 | BldgSqFt: 4939 | Lot SqFt: 7745 | Acres: 0.1778 |
| \#70 |  |  |  |  |  |
| Owner | : Ramage, Ashley A |  |  | Parcel \# | : 01745963 |
| Site | : 2025 Alpine Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA02400 |
| Mail | : 2025 Alpine Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$7,496 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$556,973 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 01/25/2016 | Sale Price | : | Doc \# | : 2016-004458 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 3307 RIDGE VIEW EST PH 1 LT 18\|Y|182048 |  |  | Market Land | : \$198,633 |
|  |  |  |  | Mkt Structure | : \$358,340 |
| Bedrooms: 3 | Bath: 2.5 | YearBuilt :1997 | BldgSqFt: 2828 | Lot SqFt: 8542 | Acres: 0.1961 |

## WFG NATIONAL TITLE: FARM REPORT / Clackamas (OR)

\#71

| Owner | : Ramasubramanian, Ramiah |  |  | Parcel \# | : 01858476 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 1995 Alpine Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA05700 |
| Mail | : 1995 Alpine Dr West Linn OR 97068 |  |  | 17-18 Taxes | \$8,160 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$597,553 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 09/29/2003 | Sale Price | : \$435,130 | Doc \# | : 0000131318 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 51\|Y|182048 |  |  | Market Land | : \$198,633 |
|  | : |  |  | Mkt Structure | \$398,920 |
| Bedrooms: 5 | Bath: 3 | YearBuilt :2003 | BldgSqFt: 3971 | Lot SqFt: 7305 | Acres: 0.1677 |
| \#72 |  |  |  |  |  |
| Owner | : Reents, William B |  |  | Parcel \# | : 01746070 |
| Site | : 2140 Alpine Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA03500 |
| Mail | : 2140 Alpine Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$8,336 |
| Land Use | : 101 Residential land improved |  |  | Market Total | \$629,753 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 02/01/2017 | Sale Price | \$605,000 | Doc \# | :0000007486 |
| Prior Sale Date |  | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 3307 RIDGE VIEW EST PH 1 LT 29\|Y|182048 |  |  | Market Land | : \$198,633 |
|  | : |  |  | Mkt Structure | : \$431,120 |
| Bedrooms: 5 | Bath: 3.5 | YearBuilt :1997 | BldgSqFt: 3926 | Lot SqFt: 7139 | Acres: 0.1639 |
| \#73 |  |  |  |  |  |
| Owner | : Reichard, Douglas W |  |  | Parcel \# | : 01745945 |
| Site | : 2010 Alpine Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA02200 |
| Mail | : 1335 SW Dellwood Ave Portland OR 97225 |  |  | 17-18 Taxes | : \$8,773 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$647,833 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 07/29/2016 | Sale Price | : \$585,000 | Doc \# | : 0000051100 |
| Prior Sale Date |  | Prior Sale Price |  | Prior Doc \# |  |
| Legal | : 3307 RIDGE VIEW EST PH 1 LT 16\|Y|182048 |  |  | Market Land | \$198,633 |
|  |  |  |  | Mkt Structure | \$449,200 |
| Bedrooms: 3 | Bath: 2.5 | YearBuilt :1997 | BldgSqFt: 3382 | Lot SqFt: 7113 | Acres: 0.1633 |


| Owner | : Remington, Tad W |  |  | Parcel \# | : 01858635 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 2140 Fircrest Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA07300 |
| Mail | : 2140 Fircrest Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$11,517 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$843,526 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 05/07/2008 | Sale Price | : \$825,000 | Doc \# | : 2008-033889 |
| Prior Sale Date |  | : Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 67\|Y|182048 |  |  | Market Land | : \$224,306 |
|  |  |  |  | Mkt Structure | : \$619,220 |
| Bedrooms: 5 | Bath: 3.5 | YearBuilt :2001 | BldgSqFt: 4797 | Lot SqFt: 7954 | Acres: 0.1826 |
| \#75 |  |  |  |  |  |
| Owner | : Remington, Tad W |  |  | Parcel \# | : 01859046 |
| Site | : null |  |  | Ref Parcel \# | : 21E35BA11400 |
| Mail | : 2140 Fircrest Dr West Linn OR 97068 |  |  | 17-18 Taxes | : |
| Land Use | : 100 Residential land, vacant |  |  | Market Total | : |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 05/08/2008 | Sale Price | : \$825,000 | Doc \# | : 0000033889 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 TR I\|Y|182048 |  |  | Market Land | : |
|  |  |  |  | Mkt Structure | : |
| Bedrooms: 0 | Bath: 0 | YearBuilt :0 | BldgSqFt: 0 | Ft: 5985 | cres: 0.1374 |

## WFG NATIONAL TITLE: FARM REPORT / Clackamas (OR)

\#76

| Owner | : Ritter, David |  |  | Parcel \# | : 01858895 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 23045 Bland Cir West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA09900 |
| Mail | : 23045 Bland Cir West Linn OR 97068 |  |  | 17-18 Taxes | : \$7,560 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$558,783 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 07/10/2007 | Sale Price | \$548,500 | Doc \# | : 0000060311 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 93\|Y|182048 |  |  | Market Land | \$196,403 |
|  | : |  |  | Mkt Structure | \$362,380 |
| Bedrooms: 4 | Bath: 2.5 | YearBuilt :2001 | BldgSqFt: 3055 | Lot SqFt: 7170 | Acres: 0.1646 |
| \#77 |  |  |  |  |  |
| Owner | : Robinson, Bryan |  |  | Parcel \# | 05029761 |
| Site | : 2162 Satter St West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA20503 |
| Mail | : 2162 Satter St West Linn OR 97068 |  |  | 17-18 Taxes | : 3 ,247 |
| Land Use | : 100 Residential land, vacant |  |  | Market Total | : \$257,098 |
| MapGrid | : 686-H7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 07/07/2017 | Sale Price | \$731,380 | Doc \# | : 0000046220 |
| Prior Sale Date | : 12/13/2016 | Prior Sale Price | \$980,000 | Prior Doc \# | : 0000085604 |
| Legal | : Subdivision | EATHERHILL 4424 | $3\|\mathrm{Y}\| 182048$ | Market Land | : \$257,098 |
|  | : |  |  | Mkt Structure |  |
| Bedrooms: 4 | Bath: 3.5 | YearBuilt :0 | BldgSqFt: 3716 | Lot SqFt: 7144 | Acres: 0.164 |

\#78

| Owner | : Robinson, Joel |  |  | Parcel \# | : 01858387 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 1970 Alpine Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA04800 |
| Mail | : 1970 Alpine Dr West Linn OR 97068 |  |  | 17-18 Taxes | \$10,511 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$778,696 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 05/02/2014 | Sale Price |  | Doc \# | : 2014-020544 |
| Prior Sale Date |  | Prior Sale Pri |  | Prior Doc \# |  |
| Legal | : Subdivision RIDGE VIEW EST \#2 PT LT 42 3499\|Y|1820 |  |  | Market Land | \$226,536 |
|  |  |  |  | Mkt Structure | \$552,160 |
| Bedrooms: 4 | Bath: 3.5 | YearBuilt :2000 | BldgSqFt: 4049 | : 8237 | Acres: 0.1891 |

\#79

| Owner | $:$ Rosemont Seven LLC | Parcel \# | $: 00391631$ |  |
| :--- | :--- | :--- | :--- | :--- |
| Site | $:$ null | Ref Parcel \# | $: 21$ E26C 00900 |  |
| Mail | $: 19155$ NE Herring Ln Newberg OR 97132 | 17-18 Taxes | $: \$ 18$ |  |
| Land Use | $: 660$ Small Tract forestland Option vacant | Market Total | $: \$ 715,990$ |  |
| MapGrid | $: 686-G 7$ |  | Millage Rate | $: 16.7806$ |
| Sale Date | $: 12 / 02 / 2014 ~$ | Sale Price | $:$ | Doc \# |
| Prior Sale Date | $:$ | Prior Sale Price $:$ | Prior Doc \# | $: 0000061832$ |
| Legal | $: 568$ ROSEMONT AC LT 65\|Y|182048 | Market Land | $: \$ 715,990$ |  |
|  | $:$ | Mkt Structure | $:$ |  |

Bedrooms: $0 \quad$ Bath: $0 \quad$ YearBuilt :0 BldgSqFt: $0 \quad$ Lot SqFt: $531959 \quad$ Acres: 12.2121

| Owner | : Rosemont Seven LLC | Parcel \# | : 00391640 |
| :---: | :---: | :---: | :---: |
| Site | : null | Ref Parcel \# | : 21E26C 00901 |
| Mail | : 19155 NE Herring Ln Newberg OR 97132 | 17-18 Taxes | : \$17 |
| Land Use | : 660 Small Tract forestland Option vacant | Market Total | : \$1,189,546 |
| MapGrid | : 686-G7 | Millage Rate | : 17.5004 |
| Sale Date | : 12/02/2014 Sale Price | Doc \# | :0000061832 |
| Prior Sale Date | Prior Sale Price | Prior Doc \# | : |
| Legal | : Subdivision ROSEMONT AC 568 LT 66 \& VAC ST\|Y|18204 | Market Land | : \$1,189,546 |
|  | : | Mkt Structure | : |

Bedrooms: $0 \quad$ Bath: $0 \quad$ YearBuilt :0 $\quad$ BldgSqFt: $0 \quad$ Lot SqFt: 493661
Acres: 11.3329

## WFG NATIONAL TITLE: FARM REPORT / Clackamas (OR)

\#81

| Owner | : Rower, Jeremy A |  |  | Parcel \# | : 01858760 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 2255 Crestview Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA08600 |
| Mail | : 2255 Crestview Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$8,194 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$604,153 |
| MapGrid | : 686-H7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 05/02/2006 | Sale Price | : \$600,000 | Doc \# | : 0000039787 |
| Prior Sale Date |  | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 80\|Y|182048 |  |  | Market Land | : \$198,633 |
|  | : |  |  | Mkt Structure | : \$405,520 |
| Bedrooms: 5 | Bath: 3 | YearBuilt :2002 | BldgSqFt: 3922 | Lot SqFt: 9949 | Acres: 0.2284 |
| \#82 |  |  |  |  |  |
| Owner | : Schleef, Daniel J |  |  | Parcel \# | : 05029766 |
| Site | : 2137 Satter St West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA20508 |
| Mail | : 2137 Satter St West Linn OR 97068 |  |  | 17-18 Taxes | : \$6,404 |
| Land Use | : 101 Residential land improved |  |  | Market Total | \$507,598 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 02/15/2018 | Sale Price | : \$712,000 | Doc \# | : 0000010008 |
| Prior Sale Date |  | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : Subdivision WEATHERHILL 4424 LT 8\|Y|182048 |  |  | Market Land | : \$283,038 |
|  | : |  |  | Mkt Structure | : \$224,560 |
| Bedrooms: 4 | Bath: 3.5 | YearBuilt :2016 | BldgSqFt: 3305 | Lot SqFt: 7214 | Acres: 0.1656 |
| \#83 |  |  |  |  |  |
| Owner | : Schmid, David |  |  | Parcel \# | : 00391668 |
| Site | : 22951 Bland Cir West Linn 97068 |  |  | Ref Parcel \# | : 21E26C 01300 |
| Mail | : 22951 Bland Cir West Linn OR 97068 |  |  | 17-18 Taxes | : \$11,781 |
| Land Use | : 401 Tract land improved |  |  | Market Total | : \$1,004,652 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 16.7806 |
| Sale Date | : 01/12/2009 | Sale Price | : | Doc \# | : 0000001530 |
| Prior Sale Date | : | Prior Sale Price | : | Prior Doc \# | : |
| Legal | : 304 BLAND AC PT LT 7\|Y|182048 |  |  | Market Land | : \$529,622 |
|  |  |  |  | Mkt Structure | : \$475,030 |
| Bedrooms: 3 | Bath: 2.5 | YearBuilt :1992 | BldgSqFt: 2829 | Lot SqFt: 212481 | Acres: 4.8779 |

\#84

| Owner | : Simpson Realty Group Lp |  |  | Parcel \# | : 01696784 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 22880 West Bluff Dr Bldg Jj West Linn 97068 |  |  | Ref Parcel \# | : 21E26D 01001 |
| Mail | : 8110 East Union Ave Denver CO 80237 |  |  | 17-18 Taxes | : \$12,567 |
| Land Use | : 701 Multi-Family improved |  |  | Market Total | : \$1,200,898 |
| MapGrid | : 686-H7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 06/22/2004 | Sale Price |  | Doc \# | : 0000057192 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# |  |
| Legal | : \&VAC ST\|Y|182048 |  |  | Market Land | : \$203,808 |
|  |  |  |  | Mkt Structure | : \$997,090 |
| Bedrooms: 0 | Bath: 0 | YearBuilt :0 | BldgSqFt: 1688 | Ft: 20038 | Acres: 0.46 |



## WFG NATIONAL TITLE: FARM REPORT / Clackamas (OR)

| Owner | : Strader, Thomas B Sr |  |  | Parcel \# | : 01858403 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 1950 Alpine Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA05000 |
| Mail | : 1950 Alpine Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$9,318 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$687,756 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 12/10/2008 | Sale Price | : \$630,000 | Doc \# | : 0000081490 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 44\|Y|182048 |  |  | Market Land | : \$226,536 |
|  | : |  |  | Mkt Structure | : \$461,220 |
| Bedrooms: 3 | Bath: 2.5 | YearBuilt :2001 | BldgSqFt: 3251 | Lot SqFt: 7083 | Acres: 0.1626 |
| \#87 |  |  |  |  |  |
| Owner | : Teixeira, Frank J IV |  |  | Parcel \# | : 01858458 |
| Site | : 1975 Alpine Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA05500 |
| Mail | : 1975 Alpine Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$7,758 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$570,403 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 09/01/2015 | Sale Price | : \$520,000 | Doc \# | : 0000059245 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 49\|Y|182048 |  |  | Market Land | : \$198,633 |
|  | : |  |  | Mkt Structure | \$371,770 |
| Bedrooms: 4 | Bath: 2.5 | YearBuilt :2000 | BldgSqFt: 2988 | Lot SqFt: 7349 | Acres: 0.1687 |
| \#88 |  |  |  |  |  |
| Owner | : Thomas, Jule W Jr |  |  | Parcel \# | : 00406563 |
| Site | : 1750 Killarney Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BB09100 |
| Mail | : 1750 Killarney Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$7,768 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$577,161 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 12/15/1998 | Sale Price | : \$275,000 | Doc \# | : 0000119661 |
| Prior Sale Date | : Prior Sale Price |  |  | Prior Doc \# | : |
| Legal |  |  |  | Market Land | : \$165,891 |
|  | : 2350 GREEN HILLS EST IV LT 58 BLK 2\|Y|182048 |  |  | Mkt Structure | : \$411,270 |
| Bedrooms: 5 | Bath: 3 | YearBuilt :1983 | BldgSqFt: 3798 | Lot SqFt: 10894 | Acres: 0.2501 |
| \#89 |  |  |  |  |  |
| Owner | : Waud-Elrod, Sarah E |  |  | Parcel \# | : 01858332 |
| Site | : 2190 Crestview Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA04300 |
| Mail | : 2190 Crestview Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$7,654 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$563,403 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 01/27/2017 | Sale Price | : \$505,000 | Doc \# | : 0000005822 |
| Prior Sale Date | : 07/21/2015 | Prior Sale Price |  | Prior Doc \# | : 0000047688 |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 37\|Y|182048 |  |  | Market Land | : \$196,403 |
|  | : |  |  | Mkt Structure | : \$367,000 |
| Bedrooms: 4 | Bath: 4.5 | YearBuilt :2001 | BldgSqFt: 3371 | Lot SqFt: 7471 | Acres: 0.1715 |
| \#90 |  |  |  |  |  |
| Owner | : Whittemore, D J |  |  | Parcel \# | : 01746098 |
| Site | : 2120 Alpine Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA03700 |
| Mail | : 2120 Alpine Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$10,390 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$762,073 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 12/29/2016 | Sale Price | : \$595,000 | Doc \# | : 0000089662 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 3307 RIDGE VIEW EST PH 1 LT 31\|Y|182048 |  |  | Market Land | : \$198,633 |
|  |  |  |  | Mkt Structure | : \$563,440 |
| Bedrooms: 4 | Bath: 4 | YearBuilt :1997 | BldgSqFt: 4269 | Lot SqFt: 7035 | Acres: 0.1615 |

## WFG NATIONAL TITLE: FARM REPORT / Clackamas (OR)

\#91

| Owner | : Wilks, Maria Chila |  |  | Parcel \# | : 00406714 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 1723 Killarney Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BB10600 |
| Mail | : 1723 Killarney Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$5,484 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$422,661 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 04/06/2017 | Sale Price | : \$515,000 | Doc \# | : 0000023320 |
| Prior Sale Date | : | Prior Sale Price |  | Prior Doc \# | . |
| Legal | : 2350 GREEN HILLS EST IV LT 14 BLK 3\|Y|182048 |  |  | Market Land | : \$165,891 |
|  | : |  |  | Mkt Structure | : \$256,770 |
| Bedrooms: 2 | Bath: 2 | YearBuilt :1980 | BldgSqFt: 1829 | Lot SqFt: 10032 | Acres: 0.2303 |
| \#92 |  |  |  |  |  |
| Owner | : Wood, Donald J |  |  | Parcel \# | : 00406572 |
| Site | : 1766 Killarney Dr West Linn 97068 |  |  | Ref Parcel \# | : 21E35BB09200 |
| Mail | : 1766 Killarney Dr West Linn OR 97068 |  |  | 17-18 Taxes | : \$5,883 |
| Land Use | : 101 Residential land improved |  |  | Market Total | : \$444,941 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 08/21/2001 | Sale Price | : \$280,000 | Doc \# | : 0000066904 |
| Prior Sale Date |  | Prior Sale Price |  | Prior Doc \# | : |
| Legal | : 2350 GREEN HILLS EST IV LT 59 BLK 2\|Y|182048 |  |  | Market Land | : \$165,891 |
|  |  |  |  | Mkt Structure | : \$279,050 |
| Bedrooms: 3 | Bath: 2.5 | YearBuilt :1987 | BIdgSqFt: 2444 | Lot SqFt: 15808 | Acres: 0.3629 |
| \#93 |  |  |  |  |  |
| Owner | : Young, Jared M |  |  | Parcel \# | : 05029765 |
| Site | : 2149 Satter St West Linn 97068 |  |  | Ref Parcel \# | : 21E35BA20507 |
| Mail | : 2149 Satter St West Linn OR 97068 |  |  | 17-18 Taxes | : \$3,488 |
| Land Use | : 100 Residential land, vacant |  |  | Market Total | : \$276,112 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 08/17/2017 | Sale Price | : \$696,495 | Doc \# | : 0000056505 |
| Prior Sale Date | : 12/13/2016 | Prior Sale Price | : \$980,000 | Prior Doc \# | : 0000085604 |
| Legal | : Subdivision WEATHERHILL 4424 LT 7\|Y|182048 |  |  | Market Land | : \$276,112 |
|  |  |  |  | Mkt Structure |  |
| Bedrooms: 6 | Bath: 4 | YearBuilt :0 | BldgSqFt: 3254 | Lot SqFt: 7087 | Acres: 0.1627 |

## \#94



| Owner | : Zhang, Jie |  |  | Parcel \# | : 01858528 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Site | : 23040 Bland Cir West Linn 97068 |  |  | Ref Parcel \# | 21E35BA06200 |
| Mail | : 3840 NW 118th PI Portland OR 97229 |  |  | 17-18 Taxes | \$8,599 |
| Land Use | : 101 Residential land improved |  |  | Market Total | \$632,906 |
| MapGrid | : 686-G7 |  |  | Millage Rate | : 18.7492 |
| Sale Date | : 02/24/2014 | Sale Price |  | Doc \# | 2014-010299 |
| Prior Sale Date | : | Prior Sale Pric |  | Prior Doc \# |  |
| Legal | : 3499 RIDGE VIEW EST \#2 LT 56\|Y|182048 |  |  | Market Land | \$226,536 |
|  |  |  |  | Mkt Structure | : \$406,370 |
| Bedrooms: 4 | Bath: 2.5 | YearBuilt :2000 | BldgSqFt: 3309 | qFt: 7497 | Acres: 0.1721 |

## WFG NATIONAL TITLE: FARM REPORT / Clackamas (OR)



## Reference Farm <br> Clackamas (OR)

| Owner | Address | Ref |
| :---: | :---: | :---: |
| 22870 Weatherhill Lic | 12870 SW Morningstar Dr Tigard OR 97223 | 1 |
| Atherton, David | 1980 Alpine Dr West Linn OR 97068 | 2 |
| Babcock, Brian E | 22995 Bland Cir West Linn OR 97068 | 3 |
| Babcock, Ronald | 22985 Bland Cir West Linn OR 97068 | 4 |
| Bauer, Robert L | 23000 S Bland Cir West Linn OR 97068 | 5 |
| Bauer, Robert L | 23000 S Bland Cir West Linn OR 97068 | 6 |
| Beachy, Jeff L | 23020 Bland Cir West Linn OR 97068 | 7 |
| Berning, Daniel S | 23026 Bland Cir West Linn OR 97068 | 8 |
| Black, Bernard | 22975 Bland Cir West Linn OR 97068 | 9 |
| Bower, Richard | 1767 Killarney Dr West Linn OR 97068 | 10 |
| Buck, Patrick G | 23016 Bland Cir West Linn OR 97068 | 11 |
| Buser, Mark | 1960 Alpine Dr West Linn OR 97068 | 12 |
| Byrne, Gregory W Jr | 1985 Alpine Dr West Linn OR 97068 | 13 |
| Cabine, William M | 2180 Crestview Dr West Linn OR 97068 | 14 |
| Chan John H Trustee | 2250 Crestview Dr West Linn OR 97068 | 15 |
| Christians, Robert J | 2110 Alpine Dr West Linn OR 97068 | 16 |
| City Of West Linn | 22500 Salamo Rd \#600 West Linn OR 97068 | 19 |
| City Of West Linn | 22500 Salamo Rd \#600 West Linn OR 97068 | 20 |
| City Of West Linn | 22500 Salamo Rd West Linn OR 97068 | 21 |
| City Of West Linn | 22500 Salamo Rd \#600 West Linn OR 97068 | 17 |
| City Of West Linn | 22500 Salamo Rd \#600 West Linn OR 97068 | 18 |
| Cook, Larry | 1703 Killarney Dr West Linn OR 97068 | 22 |
| Corry, Thomas B | 2130 Fircrest Dr West Linn OR 97068 | 23 |
| Craver, Matthew R | 2179 Satter St West Linn OR 97068 | 24 |
| Dautremont, Neil J | 23008 Bland Cir West Linn OR 97068 | 25 |
| Davis, Brian F | 1736 Killarney Dr West Linn OR 97068 | 26 |
| Emerick, Erik E | 2235 Crestview Dr West Linn OR 97068 | 27 |
| Floyd, Daniel | 2148 Satter St West Linn OR 97068 | 28 |
| Fogle, David M | 2125 Satter St West Linn OR 97068 | 29 |
| Frankle, David S | 1755 Killarney Dr West Linn OR 97068 | 30 |
| Gabel, Donald W | 2225 Crestview Dr West Linn OR 97068 | 31 |
| Gardner, James | 2167 Satter St West Linn OR 97068 | 32 |
| Germain, John | 2130 Alpine Dr West Linn OR 97068 | 33 |
| Grant, Cory Marog | 2155 Satter St West Linn OR 97068 | 34 |
| Hall, Mark A | 1697 Killarney Dr West Linn OR 97068 | 35 |
| Haney, Steven J | 2211 Crestview Dr West Linn OR 97068 | 36 |
| Hardy, David L | 22915 S Weatherhill Rd West Linn OR 97068 | 37 |
| Harmon, Charles | 2185 Crestview Dr West Linn OR 97068 | 38 |
| Hodel, Eric M | 23030 Bland Cir West Linn OR 97068 | 39 |
| Hong, Le | 2160 Fircrest Dr West Linn OR 97068 | 40 |
| Houlihan, Timothy Jr | 1990 Alpine Dr West Linn OR 97068 | 41 |
| Howard, Michael J | 2245 Crestview Dr West Linn OR 97068 | 42 |
| Huberty, David P | 2120 Fircrest Dr West Linn OR 97068 | 43 |
| Huberty, David P | 2120 Fircrest Dr West Linn OR 97068 | 44 |
| Hwang, Amanda Y | 23043 Bland Cir West Linn OR 97068 | 45 |
| Jensen, Theron K | 2215 Crestview Dr West Linn OR 97068 | 46 |
| Jones, Michael K | 23025 Bland Cir West Linn OR 97068 | 47 |
| Keller, Douglas | 2101 Satter St West Linn OR 97068 | 48 |
| Knight, Brooke | 2125 Alpine Dr West Linn OR 97068 | 49 |
| Koessler, James A | 1940 Alpine Dr West Linn OR 97068 | 50 |
| Lorenz, William C | 2100 Satter St West Linn OR 97068 | 51 |
| Luo, Lin | 2220 Crestview Dr West Linn OR 97068 | 52 |
| Malcolm, Stacee R Living Trust | 2135 Fircrest Dr West Linn OR 97068 | 53 |
| Maslen, Bobby Lynn | 12205 SW Tualatin Rd Ste 240 Tualatin OR 97062 | 55 |
| Maslen, Bobby Lynn | 12205 SW Tualatin Rd Ste 240 Tualatin OR 97062 | 56 |
| Maslen, Bobby Lynn | 12205 SW Tualatin Rd Ste 240 Tualatin OR 97062 | 54 |
| McMath, John M | 1737 Killarney Dr West Linn OR 97068 | 57 |
| McMurray, Andrew | 23004 Bland Cir West Linn OR 97068 | 58 |
| Mitchell, Charles E Jr | 2000 Alpine Dr West Linn OR 97068 | 59 |
| Moore, Margaret K | 23012 Bland Cir West Linn OR 97068 | 60 |


| Mreen, Richard | 23049 Bland Cir West Linn OR 97068 | 61 |
| :---: | :---: | :---: |
| Muresan, Emil | PO Box 537 West Linn OR 97068 | 62 |
| Musalo Robert Trustee | 2115 Fircrest Dr West Linn OR 97068 | 64 |
| Musalo Robert Trustee | 2115 Fircrest Dr West Linn OR 97068 | 63 |
| Nichols, Jon R | 2125 Fircrest Dr West Linn OR 97068 | 65 |
| Nilsen, John | 23010 Bland Cir West Linn OR 97068 | 66 |
| Obrien, Richard Martin II | 2155 Alpine Dr West Linn OR 97068 | 67 |
| Oliveros, Milette Balbin | 2113 Satter St West Linn OR 97068 | 68 |
| Percin, John J Sr | 23036 Bland Cir West Linn OR 97068 | 69 |
| Ramage, Ashley A | 2025 Alpine Dr West Linn OR 97068 | 70 |
| Ramasubramanian, Ramiah | 1995 Alpine Dr West Linn OR 97068 | 71 |
| Reents, William B | 2140 Alpine Dr West Linn OR 97068 | 72 |
| Reichard, Douglas W | 1335 SW Dellwood Ave Portland OR 97225 | 73 |
| Remington, Tad W | 2140 Fircrest Dr West Linn OR 97068 | 74 |
| Remington, Tad W | 2140 Fircrest Dr West Linn OR 97068 | 75 |
| Ritter, David | 23045 Bland Cir West Linn OR 97068 | 76 |
| Robinson, Bryan | 2162 Satter St West Linn OR 97068 | 77 |
| Robinson, Joel | 1970 Alpine Dr West Linn OR 97068 | 78 |
| Rosemont Seven LLC | 19155 NE Herring Ln Newberg OR 97132 | 79 |
| Rosemont Seven LLC | 19155 NE Herring Ln Newberg OR 97132 | 80 |
| Rower, Jeremy A | 2255 Crestview Dr West Linn OR 97068 | 81 |
| Schleef, Daniel J | 2137 Satter St West Linn OR 97068 | 82 |
| Schmid, David | 22951 Bland Cir West Linn OR 97068 | 83 |
| Simpson Realty Group Lp | 8110 East Union Ave Denver CO 80237 | 84 |
| Smith, Rodney B | 2135 Alpine Dr West Linn OR 97068 | 85 |
| Strader, Thomas B Sr | 1950 Alpine Dr West Linn OR 97068 | 86 |
| Teixeira, Frank J IV | 1975 Alpine Dr West Linn OR 97068 | 87 |
| Thomas, Jule W Jr | 1750 Killarney Dr West Linn OR 97068 | 88 |
| Waud-Elrod, Sarah E | 2190 Crestview Dr West Linn OR 97068 | 89 |
| Whittemore, D J | 2120 Alpine Dr West Linn OR 97068 | 90 |
| Wilks, Maria Chila | 1723 Killarney Dr West Linn OR 97068 | 91 |
| Wood, Donald J | 1766 Killarney Dr West Linn OR 97068 | 92 |
| Young, Jared M | 2149 Satter St West Linn OR 97068 | 93 |
| Yu, Jiang | 2150 Fircrest Dr West Linn OR 97068 | 94 |
| Zhang, Jie | 3840 NW 118th PI Portland OR 97229 | 95 |
| Zhuang, Yang | 3491 Cascade Ter West Linn OR 97068 | 96 |


| OwnerNmFirst | OwnerNmLast | SiteAddr | SiteCity | SiteState |
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|  | 22870 Weatherhill LLC | 22870 S Weatherhill Rd | West Linn | OR |
| David | Atherton | 1980 Alpine Dr | West Linn | OR |
| Brian | Babcock | 22995 Bland Cir | West Linn | OR |
| Ronald | Babcock | 22985 Bland Cir | West Linn | OR |
| Robert | Bauer |  | West Linn | OR |
| Robert | Bauer | 23000 Bland Cir | West Linn | OR |
| Jeff | Beachy | 23020 Bland Cir | West Linn | OR |
| Daniel | Berning | 23026 Bland Cir | West Linn | OR |
| Bernard | Black | 22975 Bland Cir | West Linn | OR |
| Richard | Bower | 1767 Killarney Dr | West Linn | OR |
| Patrick | Buck | 23016 Bland Cir | West Linn | OR |
| Mark | Buser | 1960 Alpine Dr | West Linn | OR |
| Gregory | Byrne Jr | 1985 Alpine Dr | West Linn | OR |
| William | Cabine | 2180 Crestview Dr | West Linn | OR |
|  | Chan John H Trustee | 2250 Crestview Dr | West Linn | OR |
| Robert | Christians | 2110 Alpine Dr | West Linn | OR |
|  | City Of West Linn |  | West Linn | OR |
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|  | City Of West Linn |  | West Linn | OR |
|  | City Of West Linn | 2145 Fircrest Dr | West Linn | OR |
| Larry | Cook | 1703 Killarney Dr | West Linn | OR |
| Thomas | Corry | 2130 Fircrest Dr | West Linn | OR |
| Matthew | Craver | 2179 Satter St | West Linn | OR |
| Neil | Dautremont | 23008 Bland Cir | West Linn | OR |
| Brian | Davis | 1736 Killarney Dr | West Linn | OR |
| Erik | Emerick | 2235 Crestview Dr | West Linn | OR |
| Daniel | Floyd | 2148 Satter St | West Linn | OR |
| David | Fogle | 2125 Satter St | West Linn | OR |
| David | Frankle | 1755 Killarney Dr | West Linn | OR |
| Donald | Gabel | 2225 Crestview Dr | West Linn | OR |
| James | Gardner | 2167 Satter St | West Linn | OR |
| John | Germain | 2130 Alpine Dr | West Linn | OR |
| Cory | Grant | 2155 Satter St | West Linn | OR |
| Mark | Hall | 1697 Killarney Dr | West Linn | OR |
| Steven | Haney | 2211 Crestview Dr | West Linn | OR |
| David | Hardy | 22915 S Weatherhill Rd | West Linn | OR |
| Charles | Harmon | 2185 Crestview Dr | West Linn | OR |
| Eric | Hodel | 23030 Bland Cir | West Linn | OR |
| Le | Hong | 2160 Fircrest Dr | West Linn | OR |
| Timothy | Houlihan Jr | 1990 Alpine Dr | West Linn | OR |
| Michael | Howard | 2245 Crestview Dr | West Linn | OR |
| David | Huberty | 2120 Fircrest Dr | West Linn | OR |
| David | Huberty | 2110 Fircrest Dr | West Linn | OR |
| Amanda | Hwang | 23043 Bland Cir | West Linn | OR |
| Theron | Jensen | 2215 Crestview Dr | West Linn | OR |


| Michael | Jones | 23025 Bland Cir | West Linn | OR |
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| Douglas | Keller | 2101 Satter St | West Linn | OR |
| Brooke | Knight | 2125 Alpine Dr | West Linn | OR |
| James | Koessler | 1940 Alpine Dr | West Linn | OR |
| William | Lorenz | 2100 Satter St | West Linn | OR |
| Lin | Luo | 2220 Crestview Dr | West Linn | OR |
|  | Malcolm, Stacee R Living Trust | 2135 Fircrest Dr | West Linn | OR |
| Bobby | Maslen |  | West Linn | OR |
| Bobby | Maslen |  | West Linn | OR |
| Bobby | Maslen | 22910 Weatherhill Rd | West Linn | OR |
| John | McMath | 1737 Killarney Dr | West Linn | OR |
| Andrew | McMurray | 23004 Bland Cir | West Linn | OR |
| Charles | Mitchell Jr | 2000 Alpine Dr | West Linn | OR |
| Margaret | Moore | 23012 Bland Cir | West Linn | OR |
| Richard | Mreen | 23049 Bland Cir | West Linn | OR |
| Emil | Muresan | 2145 Alpine Dr | West Linn | OR |
|  | Musalo Robert Trustee | 2115 Fircrest Dr | West Linn | OR |
|  | Musalo Robert Trustee | 2105 Fircrest Dr | West Linn | OR |
| Jon | Nichols | 2125 Fircrest Dr | West Linn | OR |
| John | Nilsen | 23010 Bland Cir | West Linn | OR |
| Richard | Obrien II | 2155 Alpine Dr | West Linn | OR |
| Milette | Oliveros | 2113 Satter St | West Linn | OR |
| John | Percin Sr | 23036 Bland Cir | West Linn | OR |
| Ashley | Ramage | 2025 Alpine Dr | West Linn | OR |
| Ramiah | Ramasubramanian | 1995 Alpine Dr | West Linn | OR |
| William | Reents | 2140 Alpine Dr | West Linn | OR |
| Douglas | Reichard | 2010 Alpine Dr | West Linn | OR |
| Tad | Remington | 2140 Fircrest Dr | West Linn | OR |
| Tad | Remington |  | West Linn | OR |
| David | Ritter | 23045 Bland Cir | West Linn | OR |
| Bryan | Robinson | 2162 Satter St | West Linn | OR |
| Joel | Robinson | 1970 Alpine Dr | West Linn | OR |
|  | Rosemont Seven LLC |  |  | OR |
|  | Rosemont Seven LLC |  |  | OR |
| Jeremy | Rower | 2255 Crestview Dr | West Linn | OR |
| Daniel | Schleef | 2137 Satter St | West Linn | OR |
| David | Schmid | 22951 Bland Cir | West Linn | OR |
|  | Simpson Realty Group Lp | 22880 West Bluff Dr Bldg Jj | West Linn | OR |
| Rodney | Smith | 2135 Alpine Dr | West Linn | OR |
| Thomas | Strader Sr | 1950 Alpine Dr | West Linn | OR |
| Frank | Teixeira IV | 1975 Alpine Dr | West Linn | OR |
| Jule | Thomas Jr | 1750 Killarney Dr | West Linn | OR |
| Sarah | Waud-Elrod | 2190 Crestview Dr | West Linn | OR |
| D | Whittemore | 2120 Alpine Dr | West Linn | OR |
| Maria | Wilks | 1723 Killarney Dr | West Linn | OR |
| Donald | Wood | 1766 Killarney Dr | West Linn | OR |
| Jared | Young | 2149 Satter St | West Linn | OR |


| Jiang | Yu | 2150 Fircrest Dr | West Linn OR |
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| Jie | Zhang | 23040 Bland Cir | West Linn OR |
| Yang | Zhuang | 23035 Bland Cir | West Linn OR |


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## EMERIO Oesign

CIVIL ENGINEERS \& PLANNERS

## PROJECT INTRODUCTION \& BACKGROUND INFORMATION

## PERSONAL

INFO: Steve Miller, Emerio Design, LLC - Working on behalf of the developer.
The purpose of having the neighborhood meeting is to share the proposed project with you and to get your feedback prior to submitting our application.

REQUEST: 17-Lot Residential subdivision in the R-7 Zone. The subdivision will be developed pursuant to the City of West Linn Land Use and Development Code requirements.

## SITE

LOCATION: 2300 and 23010 Bland Circle
ZONING: R-7
SITE SIZE: 3.49 Acres and is irregular in shape.
LEGAL DESCRIPTION: Tax Map Tax Map 2S1E35B; Tax Lots 400, 404, and 201

- The site is developed with two single-family dwellings, one of which will be removed as part of the project.
- The property is vegetated with a mix of trees, shrubs, and grass fields, and has an undulating topography throughout.

Brief re-cap of the project:

- 17-lot subdivision/planned unit development
- Single-family residential detached dwellings on each lot
- All houses will meet maximum height requirements for the R-7 zone
- Bland Circle will be improved along the sites frontage to City standards.
- All proposed local streets serving the project will be built to city standards, which will include parking on one-side of the street.
- The development will be developed to city standards. No exceptions, variances or adjustments are being requested.
- The minimum lot size in the R-7 zone is 7,000 square feet and all of the lots meet this lot size or are greater in size.
- A pre-application conference with the City of West Linn was already held for the project.
- No environmentally sensitive areas have been identified on the property.
- A minimum of $20 \%$ of the significant trees will be preserved with the development of the subdivision.


# Savanna Oaks Neighborhood Association Meeting December 4th, 2018 at 7:00 PM 

Minutes

Meeting was called to order at 7:00 pm by SONA President, Ed Schwarz.

In attendance were forty-seven people. Thirty-eight were members of SONA. There were seven people who were guests from the Willamette Neighborhood Association. Two people, Steve Miller of Emerio Design and Bob Schultz, property owner, were there to present plans for a 17 to 18 -unit subdivision at 23000 and 23010 Bland Circle.

Meeting minutes from the November 2018 meeting were approved with a unanimous vote.

It was reported by the President, as had been relayed by the Treasurer, that the current SONA balance is $\$ 4,730.64$

## Old Business:

1. Roberta Schwarz gave an update on the White Oak Savanna.
2. A new White Oak Savanna Committee has been established with the following people volunteering to be on it: Ed Schwarz, Roberta Schwarz, Patrick McGuire, Michael Rutten, Kim Shettler, and Carmela Selby. They took a site tour of the Savanna and make a list of restoration and maintenance items that need to be done. They took photos of problem areas and shared them with the SONA members at this meeting. They will meet with the Parks Advisory Board and make a presentation within the next few months.

## New Business:

1. A presentation was made by Steve Miller of Emerio Design and Bob Schultz, who is the owner of the property, regarding a proposed development of 17 to 18 homes at 23000 and 23010 Bland Circle. Several residents of the Fircrest and Bland areas came to this meeting because they are immediate neighbors of this location. Several questions were asked and answered. Two options were offered for proposed plans of the development.

There are two houses currently on the 3 tax lots that comprise the property. One of the houses will be retained and the other will be removed. Of the two options given one was for a Planned Unit Development (PUD) and would have 18 homes with some of them being on 5,500 to 6,000 square foot lots and some on 7,000 square foot lots with a City trail being extended by the developer for the use of the community. The other option is for 17 homes all on 7,000 square foot lots and was this was called a "standard' proposal, not a PUD. After an almost one-hour presentation and Q and A period it was asked which of the two options people in the room preferred. It was asked if "neither' was an option and, after receiving a yes to that question, it was voted that 20 people would rather that neither of these options be developed but that instead more work on the planning be done so as to minimize
problem areas including a written easement that one neighbor said she has that conflicts with these plans and several trees that are owned by different neighbors near the proposed construction. Also, the width of the street and the traffic were issues discussed. Mr. Miller and Mr. Schultz said that they will reach out to the immediate neighbors who had voiced their concerns and try to work with them to solve these problems.
2. There was an update given by the President and the Secretary on the latest submittal (MISC-18-07) to the City by Mr. Parker and his partner for the property at 2444, 2422, and 2410 Tannler Dr. A motion was made and seconded and then approved to discuss and vote on a Memorandum to the Planning Commission regarding this submittal. In summary, this Memorandum states the following: (1) The Planning Commission should conclude that the applicant's Exhibit A does not utilize the entire first floor of the building for commercial use as required by 21.050(2) (CDC) made by the owners of the property located at 2444, 2422, and 2410 Tannler Dr.; and (2) The Planning Commission should not engage in speculation as to which uses may be allowed or approved on the property. The Memorandum was read and shown to the members projected onto a white screen so that they could read it. After a lengthy discussion, a motion was made and seconded to vote on supporting the Memorandum. The vote was 35 aye 0 no and 2 abstain. Four guests from Willamette NA signed a separate Concurrence as individuals. The Memorandum to the Planning Commission along with the 13 Exhibits, the Adoption of Memorandum by SONA, and the Concurrence, will be sent to the Planning Commission at the appropriate email address and will be made part of the Public Record.
3. A review of the 2003 Council Goals and the 2018 Citizen Vision Goals as handed out at the most recent meeting of the Neighborhood Association Presidents by the current Mayor was done by the President and the Secretary. A motion was made and seconded and approved to discuss and vote on a Resolution to support the 2003 Council Goals rather than the 2018 Citizen Vision Goals. The resolution was read and shown to the members projected onto a white screen so that they could read it. After a discussion, a motion was made and seconded to vote on supporting the 2003 Council Goals rather than the 2018 Citizen Vision Goals. The vote was 28 aye 0 no and 2 abstain. It was discussed that this is a visionary and aspirational document and it should come from the citizens and not the Mayor. It was suggested that the Mayor and City Council should reach out to the WL Neighborhood Associations so that they can work on an appropriate update to the 2003 Council Goals document.
4. The Toys and Toiletries Drive by the Clackamas Women's Center was discussed by the Secretary. She asked for a vote to allow \$50 from the Savanna Oaks Neighborhood Association bank balance be used to get 50 items from the approved list of that organization for the women and children in crisis this Holiday Season. The vote was unanimous in favor. Once purchased, the items will be delivered to the WL Police Station where each Neighborhood Association has a table set up to receive donations for the Clackamas Women's Center. There is a friendly competition among the NAs during this Drive and last year Savanna Oaks tied for first place with Rosemont Ridge NA. We hope to outright win it this year.

Ed Schwarz, seeing no further business, adjourned the meeting at 9:00 pm.

Teragan \& Associates, Inc<br>3145 Westview Circle<br>Lake Oswego, OR 97034<br>971-295-4835<br>teragan.com

June 20, 2019
Planning and Building
City of West Linn
22500 Salamo Road \#1000
West Linn, Oregon 97068
Re: Arborist Report and Tree Preservation Plan for Bland Circle Subdivision
Please find enclosed the Arborist Report and Tree Preservation Plan for the 23000 Bland Circle Subdivision project located at 23000 Bland Circle in West Linn, Oregon.

Do not hesitate to contact me if you have any questions, concerns, or need any additional information.

Sincerely,



Todd Pager
ASCA Registered Consulting Arborist \#597
ISA Board Certified Master Arborist, WE-6723B
ISA Qualified Tree Risk Assessor
AICP, American Planning Association
Encl.


# Arborist Report and Tree Preservation Plan 

# For Bland Circle Subdivision at 23000 Bland Circle in West Linn, Oregon 

Prepared by:
Todd Prager, RCA \#597, ISA Board Certified Master Arborist, AICP, Teragan \& Associates, Inc.

## Table of Contents

Purpose ..... 1
Scope of Work and Limitations ..... 1
General Description ..... 1
Tree Inventory ..... 2
Tree Preservation Plan ..... 2
Tree Retention and Removal ..... 3
Significant Tree Preservation Standards ..... 4
Tree Protection Standards ..... 4
Site Specific Tree Protection Standards ..... 4
General Tree Protection Standards ..... 5
Before Construction ..... 5
During Construction ..... 6
Post Construction ..... 7
Conclusion ..... 7
Attachment 1 - Tree Inventory ..... 8
Attachment 2 - Tree Protection and Removal Exhibit ..... 21
Attachment 3 - Significant Tree Exhibit ..... 22
Attachment 4 - Assumptions and Limiting Conditions ..... 23

# 23000 Bland Circle Subdivision - West Linn, Oregon Arborist Report and Tree Preservation Plan June 20, 2019 

## Purpose

This Arborist Report and Tree Preservation Plan for the 23000 Bland Circle Subdivision project in West Linn, Oregon, is provided pursuant to City of West Linn Community Development Code Chapter 55 and the West Linn Tree Technical Manual. This report describes the existing trees located on the project site, as well as recommendations for tree removal, retention and protection. This report is based on observations made by Registered Consulting Arborist (RCA \#597), Board Certified Master Arborist (WE-6723B), and Qualified Tree Risk Assessor Todd Prager during site visits conducted in January 2019, and site plan coordination with Emerio Design.

## Scope of Work and Limitations

Teragan \& Associates, Inc. was contracted by Growth Commercial Capital, Inc. to collect tree inventory data for individual trees measuring six inches and larger in diameter and to develop an arborist report and tree preservation plan for the project. The site is planned for residential development with new streets, 14 building lots, one tract, and a water quality facility. Site plans were provided by Emerio Design illustrating the location of existing trees and potential construction impacts.

Visual Tree Assessment (VTA) was performed on individual trees located throughout the site. The enclosed tree inventory data sheet in Attachment 1 demonstrates that all trees on the site were physically identified. VTA is the standard process whereby the inspector visually assesses the tree from a distance and up close, looking for defect symptoms and evaluating overall condition and vitality of individual trees. Trees were evaluated in terms of general condition and potential construction impacts. Following the inventory fieldwork, we coordinated with Emerio Design to discuss tree protection recommendations.

The client may choose to accept or disregard the recommendations contained herein, or seek additional advice. Neither this author nor Teragan \& Associates, Inc. have assumed any responsibility for liability associated with the trees on or adjacent to this site.

## General Description

The 23000 Bland Circle Subdivision project site is located at 23000 and 23010 Bland Circle in West Linn, Oregon. The site consists of a single family home on each property,
a grove of primarily Douglas-fir (Pseudotsuga menziesii) and bigleaf maple (Acer macrophyllum) along the western half of the site, and more sparse plantings of primarily non-native ornamental trees along the eastern half of the site.

The grove of Douglas-firs and bigleaf maples is relatively young with many of the trees in marginal health and structural condition. The trees are undergoing natural stand dynamics, whereby trees are competing with one another; over time, some trees become dominant or codominant while others are suppressed beneath the dominant overstory. The largest and most prominent trees at the site are surrounding the existing house towards the center of the site adjacent to the native tree grove. The other prominent trees are at the property line along the east side of the site.

The exhibit in Attachment 2 by Emerio Design includes the locations of existing trees in relation to proposed construction impacts such as grading, streets, and building envelopes. The tree numbers in Attachment 2 correspond to the tree numbers in the inventory in Attachment 1. The trees were also tagged with their corresponding numbers in the field.

## Tree Inventory

In January, 2019, I completed an assessment of all existing trees over 6-inches in trunk diameter (DBH) at the 23000 Bland Circle Subdivision project site. A spreadsheet of the inventoried trees is provided in Attachment 1. The inventory lists the tree number, species (common and scientific names), DBH, crown radius, health condition, structural condition, whether the tree is significant as defined in the City of West Linn Community Development Code, pertinent comments, and treatment (remove/retain).

The tree numbers in the inventory in Attachment 1 correspond to the tree numbers in the tree exhibit in Attachment 2. Significant tree symbols are black and nonsignificant tree symbols are grey in Attachment 2.

Note that Emerio Design created the plan sheet in Attachment 3 with additional tree information such as significant tree canopy protection and removal areas. This information is intended to demonstrate compliance with applicable Development Code and Tree Technical Manual requirements.

## Tree Preservation Plan

We coordinated with the project team to discuss trees suitable for preservation in terms of potential construction impacts. Table 1 provides a summary of the number of non-significant and significant trees by treatment recommendation.

Table 1. Number of Inventoried Trees by Treatment and Significance.

| Treatment |  |  |  |
| :--- | :--- | :--- | :--- |
|  | Remove | Retain | Total |
| Non-Significant Trees | 176 | 42 | $\mathbf{2 1 8}$ |
| Significant Trees | 45 | $13(28.8 \%)$ | $\mathbf{5 8}$ |
| Total | 221 | 55 | 276 |

## Tree Retention and Removal

Of the 276 trees at the site, 55 trees are planned for retention and 221 trees are planned for removal to accommodate the proposed development. The following is a discussion of the proposed significant and non-significant tree retention and removal.

## Significant Tree Retention

The 55 trees planned for retention include 13 significant trees. These trees are primarily dominant Douglas-firs within the grove of trees at the west side of site. There are also significant Douglas-firs along neighboring property lines at the eastern and southern portions of the site. Note that 7 of the 13 significant trees to be retained are on the property to be developed, with the remaining 6 on neighboring properties. Only the 7 significant trees on the property to be developed are eligible to meet the preservation requirements in Section 55.100.B. 2 of the West Linn Development Code.

During the tree inventory fieldwork, we evaluated these trees in terms of potential impacts from adjacent tree removal. The trees along the eastern and southern property lines are either isolated specimens or part of a stand to remain intact, and therefore will not be significantly impacted by the removal of adjacent trees.

The trees within the existing grove at the site will be more impacted by adjacent tree removal. Generally, trees located within the interior of a forested stand are adapted to the shelter provided by edge grown trees and are at increased risk of failure when edge trees are removed. However, the trees selected for preservation are the more dominant species with higher live crown ratios ${ }^{1}$ and lower height to diameter ratios ${ }^{2}$ which indicate they are more structurally stable.

While the trees selected for preservation are anticipated to be viable for the foreseeable future, it is important to note that the removal of edge trees from a stand inherently increases the risk of adjacent tree failure. Therefore, I recommend reevaluating the trees at the time of site clearing and periodically during construction to verify that they are suitable for preservation and do not present unacceptable risks to people or property.

[^0]
## Non-Significant Tree Retention

The other 42 trees planned for retention are not significant. These trees are primarily offsite and in the surrounding neighborhood, and therefore must be retained. Two non-significant onsite trees (trees 51218 and 51555) are smaller diameter native trees and will be retained because they do not conflict with proposed grading and construction.

## Tree Removal (Significant and Non-Significant)

The 221 onsite trees planned for removal include 45 significant trees and 176 nonsignificant trees. The reasons for the proposed removals are for mass grading of the site, building construction on individual lots, and construction of the water quality facility.

## Significant Tree Preservation Standards

The proposed significant tree preservation at this site exceeds the preservation requirements in Section 55.100.B. 2 of the West Linn Development Code.

Table 2 includes a summary of the proposed significant tree preservation by number and protected area. The protected area of significant trees is determined by square feet beneath the dripline of each significant tree plus 10 feet.

Table 2. Significant Tree Preservation.

|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Treatment | Remove | Retain | \% Retain | Total |
| Significant Trees (Number) | 45 | 13 | $28.8 \%$ | 58 |
| Significant Trees (Area, sq. ft.) | 61,335 | 16,669 | $21.4 \%$ | 78,004 |

As shown in Table 2, 28.8 percent of the significant trees and 21.4 percent of the protected significant tree area is proposed to be retained. Section 55.100.B. 2 of the West Linn Development Code requires "up to 20 percent" of the protected tree area to be retained.

Therefore, the proposed significant tree preservation at the site exceeds the requirements in the West Linn Development Code. Note that additional nonsignificant trees are also proposed for preservation where possible.

## Tree Protection Standards

This section of the report includes tree protection recommendations in accordance with the City of West Linn Code and Tree Technical Manual.

## Site Specific Tree Protection Recommendations

The following site specific tree protection standards apply to this project:

- Tree Protection Fencing: The trees to be retained should be protected with tree protection fencing as shown in Attachment 2.
- Directional Felling: Fell the trees to be removed away from the trees to be retained so they do not contact or otherwise damage the trunks or branches of
the trees to be retained. No vehicles or heavy equipment should be permitted within the tree protection zones during tree removal operations.
- Stump Removal - Stumps of trees removed within the tree protection zones shall be retained in place or carefully stump ground to protect the root systems of the trees to be retained unless otherwise approved by the project arborist.
- Sediment Fence: Ensure sediment fence is placed outside the tree protection zones to protect the root systems of the trees to be retained.
- Periodic Risk Assessments: The trees to be retained that were part of a larger grove will be at increased risk of failure after adjacent tree removal. These trees should be monitored periodically and after storm events by the project arborist following site clearing to determine if any pose unreasonable risks.
- Tree Protection Zone Encroachments: In some cases, the proposed development is likely to encroach within tree protection zones. In these cases, alternative tree protection measures will be needed. In particular, standard tree protection zones overlap with allowable building footprints in the rear of lots $6,7,11,12,13$, and 14 . Tree protection fencing initially installed in the locations shown in Attachment 2 should only be adjusted based on coordination with the project arborist. Exploratory excavation is recommended during the site improvement phase of construction in order to locate roots of protected trees and assess potential impacts to critical roots. The contractor should coordinate with the project arborist to adjust tree protection fencing, monitor exploratory excavation, and evaluate potential root impacts. The arborist should then prepare a supplemental memorandum containing recommendations to minimize root impacts at specific trees on these lots. If critical roots are encountered, customized home plans may be needed to avoid critical root impacts and/or modified foundations may be necessary to allow encroachment into the critical root zone while avoiding excavation and root pruning by using pier and beam designs to span foundations across root zones. Tree protection recommendations specific to each lot should be required at the time of plat based on what is learned during exploratory excavation and evaluation of potential impacts in terms of lot specific building plans.
- Modify Grading: Proposed grading encroaches into the tree protection zones of trees 51360 and 51437. This grading should be modified so that it does not encroach into the tree protection zones shown in Attachment 2.


## General Tree Protection Standards

The following general tree protection standards are consistent with the City of West Linn Code and Tree Technical Manual.

## Before Construction

1. Tree Protection Zone. The project arborist shall designate the Tree Protection Zone (TPZ) for each tree to be protected. Where feasible, the size of the TPZ shall be established at the dripline of the tree plus 10 -feet for significant trees. Alternatively, the TPZ shall be established at a minimum
radius from the trunks of .5 feet per inch of DBH. Where improvements (driveways, buildings, and utilities) must be installed closer to the tree(s), the TPZ may be established within the standard setbacks if the project arborist, in coordination with the City Arborist, determines that the tree(s) will not be unduly damaged. The location of TPZs shall be shown on construction drawings.
2. Protection Fencing. Protection fencing shall serve as the tree protection zone and shall be erected before demolition, grubbing, grading, or construction begins. All trees to be retained shall be protected by six-foot-high chain link fences installed at the edge of the TPZ. Protection fencing shall be secured to two-inch diameter galvanized iron posts, driven to a depth of a least two feet, placed no further than 10 -feet apart. If fencing is located on pavement, posts may be supported by an appropriate grade level concrete base. Protection fencing shall remain in place until final inspection of the project permit, or in consultation with the project arborist.
3. Signage. An $8.5 \times 11$-inch sign stating, "WARNING: Tree Protection Zone," shall be displayed on each protection fence at all times.
4. Designation of Cut Trees. Trees to be removed shall be clearly marked with construction flagging, tree-marking paint, or other methods approved in advance by the project arborist. Trees shall be carefully removed so as to avoid either above or below ground damage to those trees to be preserved.
5. Preconstruction Conference. The project arborist shall be on site to discuss methods of tree removal and tree protection prior to any construction.
6. Verification of Tree Protection Measures. Prior to commencement of construction, the project arborist shall verify in writing to the City Arborist that tree protection fencing has been satisfactorily installed.

## During Construction

7. Tree Protection Zone Maintenance. The protection fencing shall not be moved, removed, or entered by equipment except under direction of the project arborist, in coordination with the City Arborist.
8. Storage of Material or Equipment. The contractor shall not store materials or equipment within the TPZ.
9. Excavation within the TPZ. Excavation with the TPZ shall be avoided if alternatives are available. If excavation within the TPZ is unavoidable, the project arborist shall evaluate the proposed excavation to determine methods to minimize impacts to trees. This can include tunneling, hand digging or other approaches. All construction within the TPZ shall be under the on-site technical supervision of the project arborist, in coordination with the City Arborist.
10. Tree Protection Zone. The project arborist shall monitor construction activities and progress, and provide written reports to the developer and the City at regular intervals. Tree protection inspections shall occur monthly or more frequently if needed.
11. Quality Assurance. The project arborist shall supervise proper execution of this plan during construction activities that could encroach on retained trees.

Tree protection site inspection monitoring reports shall be provided to the Client and City on a regular basis throughout construction.

## Post Construction

12. Final Report. After the project has been completed, the project arborist shall provide a final report to the developer and the City. The final report shall include concerns about any trees negatively impacted during construction, and describe the measures needed to maintain and protect the remaining trees for a minimum of two years after project completion.

## Conclusion

The recommendations in this report meet the applicable requirements in the City of West Linn Code and Tree Technical Manual for the 23000 Bland Circle Subdivision project.

Please contact me if you have questions, concerns, or need any additional information.

Sincerely,


Todd Pager
ASCA Registered Consulting Arborist \#597
ISA Board Certified Master Arborist, WE-6723B
ISA Qualified Tree Risk Assessor
AICP, American Planning Association
Attachment 1: Tree Inventory
Attachment 2: Tree Removal and Protection Exhibit
Attachment 3: Significant Tree Exhibit
Attachment 4: Assumptions and Limiting Conditions

| Tree No. | Common Name | Scientific Name | DBH ${ }^{1}$ | Single DBH ${ }^{2}$ | C-Rad ${ }^{3}$ | Condition ${ }^{4}$ | Structure | Sig. ${ }^{5}$ | Comments | Treatment |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 50094 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | not located | n/a |
| 50095 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | not located | n/a |
| 50096 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | not located | n/a |
| 50290 | Douglas-fir | Pseudotsuga menziesii | 36 | 36 | 26 | good | fair | no | codominant at 2' with included bark, size estimated | retain |
| 50291 | Douglas-fir | Pseudotsuga menziesii | 34 | 34 | 22 | good | fair | no | side pruned for overhead power | retain |
| 50292 | Douglas-fir | Pseudotsuga menziesii | 14 | 14 | 22 | poor | poor | no | topped for overhead power | retain |
| 50295 | English oak | Quercus robur | 1.5 | 1.5 | 2 | fair | fair | no | average nursery stock | retain |
| 50298 | English oak | Quercus robur | 1.5 | 1.5 | 2 | fair | fair | no | average nursery stock | retain |
| 50302 | English oak | Quercus robur | 13 | 13 | 21 | good | fair | no | multiple leaders | retain |
| 50303 | English oak | Quercus robur | 13 | 13 | 18 | good | fair | no | multiple leaders | retain |
| 50402 | oak | Quercus sp. | 11 | 11 | 16 | good | fair | no | multiple leaders | retain |
| 50403 | English oak | Quercus robur | 12 | 12 | 15 | good | fair | no | codominant at 8' with included bark | retain |
| 50407 | English oak | Quercus robur | 14 | 14 | 19 | good | fair | no | multiple leaders | retain |
| 50609 | English oak | Quercus robur | 12 | 12 | 16 | good | fair | no | multiple leaders, girdling roots | remove |
| 50610 | English oak | Quercus robur | 15 | 15 | 23 | good | fair | no | multiple leaders | remove |
| 50899 | Raywood ash | Fraxinus angustifolia 'Raywood' | 4 | 4 | 6 | good | fair | no | multiple leaders | retain |
| 50900 | Raywood ash | Fraxinus angustifolia 'Raywood' | 5 | 5 | 7 | fair | fair | no | multiple leaders, significant lean towards street | retain |
| 50901 | Raywood ash | Fraxinus angustifolia 'Raywood' | 8 | 8 | 12 | good | fair | no | multiple leaders | retain |
| 50933 | Raywood ash | Fraxinus angustifolia 'Raywood' | 8 | 8 | 13 | good | fair | no | multiple leaders | retain |
| 50936 | Raywood ash | Fraxinus angustifolia 'Raywood' | 5 | 5 | 10 | good | fair | no | multiple leaders | retain |
| 50937 | Raywood ash | Fraxinus angustifolia 'Raywood' | 3 | 3 | 6 | poor | poor | no | thin crown, sunscald | retain |
| 50938 | Raywood ash | Fraxinus angustifolia 'Raywood' | 4 | 4 | 6 | poor | poor | no | thin crown, sunscald, significant epicormic growth | retain |
| 50939 | Raywood ash | Fraxinus angustifolia 'Raywood' | 6 | 6 | 12 | fair | fair | no | multiple leaders, significant lean towards street | retain |


| Tree No. | Common Name | Scientific Name | DBH ${ }^{1}$ | Single DBH $^{2}$ | C-Rad ${ }^{3}$ | Condition ${ }^{4}$ | Structure | Sig.? ${ }^{5}$ | Comments | Treatment |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 51002 | Alaska cedar | Cupressus nootkatensis | 6 | 6 | 6 | good | fair | no | multiple leaders, size estimated | retain |
| 51003 | Alaska cedar | Cupressus nootkatensis | 7 | 7 | 6 | good | fair | no | multiple leaders, size estimated | retain |
| 51004 | Alaska cedar | Cupressus nootkatensis | 8 | 8 | 10 | good | fair | no | multiple leaders, size estimated | retain |
| 51016 | Japanese maple | Acer palmatum | 3 | 3 | 6 | fair | fair | no | sunscald | retain |
| 51025 | Oregon white oak | Quercus garryana | $\begin{gathered} 14,12, \\ 12 \end{gathered}$ | 16 | 22 | fair | fair | no | multiple leaders at ground level, size estimated | retain |
| 51040 | Douglas-fir | Pseudotsuga menziesii | 22 | 22 | 18 | good | fair | no | codominant at 25', size estimated | retain |
| 51055 | incense cedar | Calocedrus decurrens | 14 | 14 | 11 | good | fair | no | moderately one sided | retain |
| 51056 | Colorado blue spruce | Picea pungens | 5 | 5 | 5 | good | fair | no | moderately one sided | retain |
| 51080 | Douglas-fir | Pseudotsuga menziesii | 36 | 36 | 27 | good | fair | yes | moderately one sided | retain |
| 51081 | Douglas-fir | Pseudotsuga menziesii | 31 | 31 | 27 | good | fair | yes | one sided, codominant at 30' | retain |
| 51082 | Douglas-fir | Pseudotsuga menziesii | 18 | 18 | 11 | fair | poor | no | 40\% live crown ratio (Icr), poor trunk taper | retain |
| 51083 | Douglas-fir | Pseudotsuga menziesii | 16 | 16 | 12 | fair | fair | no | one sided, marginal trunk taper | retain |
| 51084 | Douglas-fir | Pseudotsuga menziesii | 8 | 8 | 7 | poor | poor | no | suppressed | retain |
| 51085 | English hawthorn | Crataegus monogyna | 6 | 6 | 8 | fair | fair | no | overtopped by adjacent trees | retain |
| 51086 | Douglas-fir | Pseudotsuga menziesii | 26 | 26 | 20 | good | fair | yes | moderately one sided | retain |
| 51087 | Douglas-fir | Pseudotsuga menziesii | 11 | 11 | 11 | fair | fair | no | overtopped by adjacent trees, one sided, codominant at top | retain |
| 51088 | Douglas-fir | Pseudotsuga menziesii | 7 | 7 | 9 | good | fair | no | moderately one sided | retain |
| 51089 | incense cedar | Calocedrus decurrens | 8 | 8 | 5 | good | fair | no | moderately one sided | retain |
| 51090 | black walnut | Juglans nigra | 20 | 20 | 32 | fair | fair | no | one sided, branch dieback, epicormic growth | remove |
| 51133 | Oregon white oak | Quercus garryana | 25 | 25 | 20 | good | fair | yes | codominant at 3' with internal crack | retain |
| 51148 | Colorado blue spruce | Picea pungens | 8 | 8 | 10 | good | fair | no | multiple leaders, offsite, size estimated | retain |
| 51149 | Austrian pine | Pinus nigra | 10 | 10 | 10 | good | fair | no | codominant at 6', offsite, site estimated | retain |

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Phone: 971.295.4835 • Fax: 503.697.1976
Email: todd@teragan.com•Website: teragan.com

Arboricultural Consultants
Attachment 1

| Tree No. | Common Name | Scientific Name | DBH ${ }^{1}$ | Single <br> DBH $^{2}$ | C-Rad ${ }^{3}$ | Condition ${ }^{4}$ | Structure | Sig.? ${ }^{5}$ | Comments | Treatment |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 51167 | black walnut | Juglans nigra | 14 | 14 | 17 | fair | fair | no | one sided, codominant at 15 ', branch dieback | remove |
| 51168 | black walnut | Juglans nigra | 12 | 12 | 11 | poor | poor | no | extensive dieback and epicormic growth | remove |
| 51169 | black walnut | Juglans nigra | 13 | 13 | 22 | poor | poor | no | extensive dieback and epicormic growth, significant heartrot in trunk | remove |
| 51170 | bigleaf maple | Acer macrophyllum | 7,3 | 7 | 14 | fair | fair | no | one sided, codominant at ground level | remove |
| 51172 | Douglas-fir | Pseudotsuga menziesii | 17 | 17 | 18 | good | fair | no | one sided | remove |
| 51173 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | same as 51377 | n/a |
| 51175 | Douglas-fir | Pseudotsuga menziesii | 26 | 26 | 23 | good | fair | yes | one sided | remove |
| 51183 | bigleaf maple | Acer macrophyllum | 9 | 9 | 7 | fair | fair | no | 50\% Icr | remove |
| 51184 | bigleaf maple | Acer macrophyllum | 9,6 | 10 | 18 | fair | fair | no | codominant at ground level, one sided | remove |
| 51185 | bigleaf maple | Acer macrophyllum | 7 | 7 | 12 | fair | fair | no | $33 \% \mathrm{lcr}$ | remove |
| 51186 | bigleaf maple | Acer macrophyllum | 12 | 12 | 14 | fair | fair | no | multiple leaders | remove |
| 51188 | bigleaf maple | Acer macrophyllum | 8 | 8 | 12 | fair | fair | no | 33\% Icr | remove |
| 51189 | bigleaf maple | Acer macrophyllum | 9 | 9 | 13 | good | fair | no | sweep in lower trunk | remove |
| 51192 | bigleaf maple | Acer macrophyllum | 8 | 8 | 11 | good | fair | no | moderately one sided | remove |
| 51195 | bigleaf maple | Acer macrophyllum | 9 | 9 | 9 | poor | poor | no | smothered by ivy | remove |
| 51196 | Douglas-fir | Pseudotsuga menziesii | 13 | 13 | 8 | fair | fair | no | one sided, significant ivy in crown | remove |
| 51197 | bigleaf maple | Acer macrophyllum | 6 | 6 | 10 | fair | fair | no | one sided, 25\% Icr | remove |
| 51218 | Douglas-fir | Pseudotsuga menziesii | 11 | 11 | 12 | good | good | no |  | retain |
| 51219 | black walnut | Juglans nigra | 22 | 22 | 20 | poor | poor | no | thin crown, significant dieback, codominant at 7', size estimated | retain |
| 51220 | Douglas-fir | Pseudotsuga menziesii | 21 | 21 | 18 | good | fair | yes | one sided | remove |
| 51221 | Douglas-fir | Pseudotsuga menziesii | 23 | 23 | 17 | good | fair | yes | one sided | remove |
| 51222 | Douglas-fir | Pseudotsuga menziesii | 27 | 27 | 19 | good | fair | yes | one sided | remove |
| 51223 | Douglas-fir | Pseudotsuga menziesii | 24 | 24 | 25 | good | fair | yes | moderately one sided | remove |
| 51226 | Douglas-fir | Pseudotsuga menziesii | 18 | 18 | 14 | fair | poor | no | 25\% Icr, marginal trunk taper | remove |
| 51229 | Douglas-fir | Pseudotsuga menziesii | 30 | 30 | 22 | good | fair | yes | one sided | remove |
| 51236 | Douglas-fir | Pseudotsuga menziesii | 24 | 24 | 26 | good | good | no | size estimated | retain |
| 51360 | Douglas-fir | Pseudotsuga menziesii | 30 | 30 | 32 | good | fair | yes | moderately one sided | retain |

Teragan Associates, Inc.
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| Tree No. | Common Name | Scientific Name | DBH ${ }^{1}$ | Single DBH $^{2}$ | C-Rad ${ }^{3}$ | Condition ${ }^{4}$ | Structure | Sig.? ${ }^{5}$ | Comments | Treatment |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 51361 | Douglas-fir | Pseudotsuga menziesii | 25 | 25 | 22 | good | fair | yes | one sided, surrounded by retaining wall | remove |
| 51362 | Douglas-fir | Pseudotsuga menziesii | 26 | 26 | 29 | good | fair | yes | one sided, surrounded by retaining wall | remove |
| 51363 | Douglas-fir | Pseudotsuga menziesii | 24 | 24 | 20 | good | fair | yes | moderately one sided | remove |
| 51364 | Douglas-fir | Pseudotsuga menziesii | 5 | 5 | 10 | poor | poor | no | suppressed | remove |
| 51365 | bigleaf maple | Acer macrophyllum | 6 | 6 | 17 | fair | fair | no | one sided | remove |
| 51366 | Douglas-fir | Pseudotsuga menziesii | 8 | 8 | 16 | poor | poor | no | suppressed | remove |
| 51367 | bigleaf maple | Acer macrophyllum | 12 | 12 | 14 | poor | poor | no | overtopped by adjacent trees, significant dieback | remove |
| 51368 | Douglas-fir | Pseudotsuga menziesii | 20 | 20 | 18 | good | fair | yes | moderately one sided | remove |
| 51369 | Douglas-fir | Pseudotsuga menziesii | 21 | 21 | 20 | good | fair | yes | one sided, marginal trunk taper | remove |
| 51370 | Douglas-fir | Pseudotsuga menziesii | 21 | 21 | 20 | good | fair | yes | one sided, marginal trunk taper | remove |
| 51371 | Douglas-fir | Pseudotsuga menziesii | 9 | 9 | 12 | poor | poor | no | suppressed | remove |
| 51372 | Douglas-fir | Pseudotsuga menziesii | 23 | 23 | 19 | good | fair | yes | moderately one sided | remove |
| 51373 | Douglas-fir | Pseudotsuga menziesii | 15 | 15 | 12 | fair | poor | no | poor trunk taper, $33 \%$ Icr, crown extensive suppressed by adjacent trees | remove |
| 51374 | Douglas-fir | Pseudotsuga menziesii | 21 | 21 | 12 | fair | fair | yes | one sided, crown extension suppressed by adjacent trees | remove |
| 51375 | Douglas-fir | Pseudotsuga menziesii | 10 | 10 | 3 | poor | poor | no | suppressed, significant dieback, Phellinus pini infection | remove |
| 51376 | Douglas-fir | Pseudotsuga menziesii | 22 | 22 | 22 | good | fair | yes | one sided | remove |
| 51377 | Douglas-fir | Pseudotsuga menziesii | 19 | 19 | 17 | good | fair | no | one sided | remove |
| 51378 | madrone | Arbutus menziesii | 7 | 7 | 4 | poor | poor | no | suppressed, significant dieback | remove |
| 51384 | Douglas-fir | Pseudotsuga menziesii | 11 | 11 | 9 | poor | poor | no | suppressed | remove |
| 51385 | Douglas-fir | Pseudotsuga menziesii | 11 | 11 | 13 | fair | fair | no | one sided, marginal trunk taper | remove |
| 51386 | madrone | Arbutus menziesii | 8 | 8 | 8 | fair | fair | no | overtopped by adjacent trees, lower branch dieback | remove |
| 51387 | Douglas-fir | Pseudotsuga menziesii | 12 | 12 | 11 | fair | poor | no | one sided, $33 \% \mathrm{lcr}$, poor trunk taper | remove |
| 51387.1 | Douglas-fir | Pseudotsuga menziesii | 13 | 13 | 14 | fair | fair | no | one sided, marginal trunk taper, added to site map in approximate location by arborist | remove |

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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 51388 | Douglas-fir | Pseudotsuga menziesii | 18 | 18 | 21 | good | fair | no | one sided, marginal trunk taper | remove |
| 51389 | Douglas-fir | Pseudotsuga menziesii | 8 | 8 | 8 | poor | poor | no | suppressed, poor trunk taper | remove |
| 51390 | Douglas-fir | Pseudotsuga menziesii | 21 | 21 | 19 | fair | fair | yes | 40\% Icr | remove |
| 51391 | Douglas-fir | Pseudotsuga menziesii | 19 | 19 | 18 | good | fair | yes | one sided | remove |
| 51392 | Douglas-fir | Pseudotsuga menziesii | 20 | 20 | 19 | good | fair | yes | one sided | remove |
| 51393 | bigleaf maple | Acer macrophyllum | 7 | 7 | 8 | poor | poor | no | suppressed | remove |
| 51394 | Douglas-fir | Pseudotsuga menziesii | 17 | 17 | 14 | good | fair | no | one sided | remove |
| 51395 | Douglas-fir | Pseudotsuga menziesii | 14 | 14 | 12 | fair | fair | no | 40\% Icr, marginal trunk taper | remove |
| 51396 | Douglas-fir | Pseudotsuga menziesii | 15 | 15 | 17 | fair | fair | no | one sided, lost top | remove |
| 51397 | Douglas-fir | Pseudotsuga menziesii | 10 | 10 | 6 | poor | poor | no | suppressed, P. pini along trunk | remove |
| 51398 | Douglas-fir | Pseudotsuga menziesii | 21 | 21 | 19 | good | fair | yes | moderately one sided, codominant at 25' | remove |
| 51399 | bigleaf maple | Acer macrophyllum | 12 | 12 | 12 | poor | poor | no | one sided, significant branch dieback | remove |
| 51400 | bigleaf maple | Acer macrophyllum | 10,9 | 13 | 15 | fair | fair | no | one sided, codominant at ground level | remove |
| 51401 | bigleaf maple | Acer macrophyllum | 6 | 6 | 10 | fair | fair | no | one sided | remove |
| 51402 | bigleaf maple | Acer macrophyllum | 7 | 7 | 10 | fair | fair | no | one sided | remove |
| 51403 | bigleaf maple | Acer macrophyllum | 13 | 13 | 18 | good | fair | no | one sided, multiple leaders | remove |
| 51404 | bigleaf maple | Acer macrophyllum | 23 | 23 | 28 | fair | fair | no | one sided, multiple leaders | remove |
| 51405 | bigleaf maple | Acer macrophyllum | 6 | 6 | 5 | fair | poor | no | 25\% Icr, poor trunk taper | remove |
| 51406 | bigleaf maple | Acer macrophyllum | 6 | 6 | 12 | poor | poor | no | overtopped by adjacent trees, suppressed | remove |
| 51407 | Douglas-fir | Pseudotsuga menziesii | 19 | 19 | 15 | fair | fair | no | 40\% Icr | remove |
| 51408 | Douglas-fir | Pseudotsuga menziesii | 19 | 19 | 14 | poor | poor | no | 60\% Icr, significant P. pini along trunk | remove |
| 51409 | bigleaf maple | Acer macrophyllum | 10 | 10 | 12 | fair | fair | no | multiple leaders, marginal trunk taper | remove |
| 51410 | bigleaf maple | Acer macrophyllum | 15 | 15 | 19 | fair | fair | no | codominant at 12' with previous leader failure | remove |
| 51411 | bigleaf maple | Acer macrophyllum | 10 | 10 | 9 | poor | poor | no | branch dieback, epicormic growth at base of trunk | remove |
| 51412 | bigleaf maple | Acer macrophyllum | 6 | 6 | 8 | poor | poor | no | one sided | remove |
| 51413 | Douglas-fir | Pseudotsuga menziesii | 35 | 35 | 30 | good | good | yes | moderately one sided | remove |

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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 51414 | bigleaf maple | Acer macrophyllum | 15 | 15 | 20 | good | fair | no | one sided, codominant at 15 ' with included bark | remove |
| 51415 | Douglas-fir | Pseudotsuga menziesii | 14 | 14 | 11 | good | fair | no | one sided, marginal trunk taper | remove |
| 51416 | Douglas-fir | Pseudotsuga menziesii | 24 | 24 | 24 | good | fair | yes | one sided | remove |
| 51417 | bigleaf maple | Acer macrophyllum | 9 | 9 | 15 | fair | fair | no | one sided, codominant at 10', overtopped by adjacent trees | remove |
| 51418 | bigleaf maple | Acer macrophyllum | 9 | 9 | 14 | good | fair | no | one sided | remove |
| 51419 | bigleaf maple | Acer macrophyllum | 6 | 6 | 11 | poor | poor | no | suppressed | remove |
| 51420 | bigleaf maple | Acer macrophyllum | 14 | 14 | 16 | fair | fair | no | one sided, wound seam in lower trunk | remove |
| 51421 | bigleaf maple | Acer macrophyllum | 10 | 10 | 15 | fair | fair | no | codominant at 10', upright crown growth, marginal trunk taper | remove |
| 51422 | bigleaf maple | Acer macrophyllum | 7 | 7 | 12 | fair | fair | no | one sided, moderately suppressed | remove |
| 51423 | Douglas-fir | Pseudotsuga menziesii | 12 | 12 | 10 | fair | poor | no | 35\% Icr, poor trunk taper | remove |
| 51424 | Douglas-fir | Pseudotsuga menziesii | 24 | 24 | 23 | good | fair | yes | moderately one sided | remove |
| 51425 | Douglas-fir | Pseudotsuga menziesii | 19 | 19 | 19 | good | fair | yes | one sided | remove |
| 51426 | bigleaf maple | Acer macrophyllum | 7 | 7 | 14 | poor | poor | no | suppressed | remove |
| 51427 | Douglas-fir | Pseudotsuga menziesii | 14 | 14 | 10 | fair | poor | no | 25\% Icr, poor trunk taper | remove |
| 51428 | Douglas-fir | Pseudotsuga menziesii | 11 | 11 | 6 | fair | poor | no | 25\% Icr, poor trunk taper | remove |
| 51429 | Douglas-fir | Pseudotsuga menziesii | 18 | 18 | 18 | fair | fair | no | 40\% lcr, one sided | remove |
| 51430 | Douglas-fir | Pseudotsuga menziesii | 13 | 13 | 10 | fair | poor | no | 25\% Icr, poor trunk taper | remove |
| 51431 | madrone | Arbutus menziesii | 11 | 11 | 2 | very poor | very poor | no | 95\% dead | remove |
| 51432 | Douglas-fir | Pseudotsuga menziesii | 9 | 9 | 8 | fair | poor | no | 20\% Icr, poor trunk taper | remove |
| 51433 | Douglas-fir | Pseudotsuga menziesii | 8 | 8 | 10 | fair | poor | no | 25\% lcr, poor trunk taper | remove |
| 51434 | Douglas-fir | Pseudotsuga menziesii | 21 | 21 | 12 | fair | fair | yes | 50\% lcr, marginal trunk taper | remove |
| 51435 | Douglas-fir | Pseudotsuga menziesii | 9 | 9 | 6 | poor | poor | no | suppressed, $10 \% \mathrm{lcr}$ | remove |
| 51436 | Douglas-fir | Pseudotsuga menziesii | 21 | 21 | 25 | good | fair | yes | one sided | remove |
| 51437 | Douglas-fir | Pseudotsuga menziesii | 27 | 27 | 28 | good | fair | yes | codominant at 25 ' with included bark | retain |
| 51448 | Douglas-fir | Pseudotsuga menziesii | 23 | 23 | 14 | fair | fair | yes | $40 \%$ Icr, previously lost top with new top | remove |
| 51449 | Douglas-fir | Pseudotsuga menziesii | 10 | 10 | 10 | fair | poor | no | moderately suppressed, poor trunk taper | remove |

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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 51450 | Douglas-fir | Pseudotsuga menziesii | 18 | 18 | 16 | fair | poor | no | 40\% Icr, marginal trunk taper | remove |
| 51451 | Douglas-fir | Pseudotsuga menziesii | 18 | 18 | 16 | very poor | very poor | no | Phaeolus schwenitzii conk at base of trunk, one sided, poor trunk taper | remove |
| 51512 | orchard apple | Malus domestica | 9 | 9 | 16 | fair | fair | no | not maintained for fruit production | remove |
| 51538 | Douglas-fir | Pseudotsuga menziesii | 48 | 48 | 20 | good | good | yes | 70\% Icr | remove |
| 51544 | bigleaf maple | Acer macrophyllum | 28 | 28 | 23 | fair | poor | no | multiple leaders at 1' with decay, stump sprout | remove |
| 51545 | Douglas-fir | Pseudotsuga menziesii | 23 | 23 | 25 | good | fair | yes | one sided | remove |
| 51546 | madrone | Arbutus menziesii | 19 | 19 | 13 | poor | poor | no | overtopped by adjacent trees, 50\% dead | remove |
| 51547 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | same as 51546 | n/a |
| 51548 | Douglas-fir | Pseudotsuga menziesii | 21 | 21 | 18 | fair | fair | yes | one sided, previously lost top at 50' with new top | remove |
| 51549 | Douglas-fir | Pseudotsuga menziesii | 20 | 20 | 22 | good | fair | yes | one sided, codominant at 30' | remove |
| 51550 | bigleaf maple | Acer macrophyllum | 9 | 9 | 24 | poor | poor | no | suppressed | remove |
| 51551 | Douglas-fir | Pseudotsuga menziesii | 22 | 22 | 19 | good | fair | yes | 60\% Icr, significant P. pini along trunk | remove |
| 51552 | Douglas-fir | Pseudotsuga menziesii | 19 | 19 | 22 | good | fair | yes | one sided, marginal trunk taper | retain |
| 51553 | Douglas-fir | Pseudotsuga menziesii | 28 | 28 | 20 | good | fair | yes | moderately one sided | retain |
| 51554 | bigleaf maple | Acer macrophyllum | 34 | 34 | 30 | poor | poor | no | significant decay at base of trunk, multiple leaders, large past scaffold failures | remove |
| 51555 | bigleaf maple | Acer macrophyllum | 7 | 7 | 13 | fair | fair | no | one sided, codominant at 15' | retain |
| 51556 | plum | Prunus sp. | 10 | 10 | 12 | fair | fair | no | codominant at 10', significant ivy on trunk | remove |
| 51557 | bigleaf maple | Acer macrophyllum | 15 | 15 | 14 | poor | poor | no | smothered by ivy, branch dieback | remove |
| 51580 | bigleaf maple | Acer macrophyllum | 13 | 13 | 16 | fair | fair | no | one sided, multiple leaders, overtopped by adjacent trees | remove |
| 51581 | bigleaf maple | Acer macrophyllum | 8 | 8 | 11 | poor | poor | no | one sided, multiple leaders, overtopped by adjacent trees | remove |
| 51582 | bigleaf maple | Acer macrophyllum | 7 | 7 | 9 | poor | poor | no | one sided, multiple leaders, overtopped by adjacent trees | remove |

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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 51583 | bigleaf maple | Acer macrophyllum | 8 | 8 | 15 | poor | poor | no | one sided, multiple leaders, overtopped by adjacent trees | remove |
| 51584 | bigleaf maple | Acer macrophyllum | 9 | 9 | 12 | poor | poor | no | suppressed | remove |
| 51585 | sweet cherry | Prunus avium | 18 | 18 | 20 | good | fair | no | multiple leaders | remove |
| 51586 | bigleaf maple | Acer macrophyllum | 16 | 16 | 16 | fair | fair | no | multiple leaders, significant ivy on trunk | remove |
| 51587 | Douglas-fir | Pseudotsuga menziesii | 24 | 24 | 21 | good | good | yes | moderately one sided | remove |
| 51588 | bigleaf maple | Acer macrophyllum | 19 | 19 | 24 | good | fair | no | one sided, multiple leaders | remove |
| 51589 | English hawthorn | Crataegus monogyna | 6 | 6 | 11 | fair | fair | no | overtopped by adjacent trees, multiple leaders | remove |
| 51590 | bigleaf maple | Acer macrophyllum | 10 | 10 | 20 | fair | fair | no | one sided, overtopped by adjacent trees, multiple leaders | remove |
| 51591 | bigleaf maple | Acer macrophyllum | 7 | 7 | 16 | fair | fair | no | one sided, multiple leaders, overtopped by adjacent trees | remove |
| 51592 | bigleaf maple | Acer macrophyllum | 7 | 7 | 15 | fair | fair | no | one sided, multiple leaders, overtopped by adjacent trees | remove |
| 51593 | bigleaf maple | Acer macrophyllum | 13 | 13 | 20 | poor | poor | no | one sided, multiple leaders, significant heartrot in trunk | remove |
| 51594 | Douglas-fir | Pseudotsuga menziesii | 11 | 11 | 11 | good | fair | no | moderately one sided, marginal trunk taper | remove |
| 51595 | bigleaf maple | Acer macrophyllum | 7 | 7 | 19 | poor | poor | no | suppressed, overtopped by adjacent trees | remove |
| 51596 | Douglas-fir | Pseudotsuga menziesii | 17 | 17 | 16 | good | fair | no | 50\% lcr, moderately one sided | remove |
| 51597 | bigleaf maple | Acer macrophyllum | 9 | 9 | 14 | good | fair | no | one sided, multiple leaders | remove |
| 51598 | Douglas-fir | Pseudotsuga menziesii | 16 | 16 | 14 | good | fair | no | $60 \%$ Icr, one sided, marginal trunk taper | remove |
| 51599 | bigleaf maple | Acer macrophyllum | 15 | 15 | 19 | fair | fair | no | codominant at 6', one sided | remove |
| 51600 | Douglas-fir | Pseudotsuga menziesii | 14 | 14 | 14 | good | fair | no | 40\% Icr, one sided, marginal trunk taper | remove |
| 51601 | Douglas-fir | Pseudotsuga menziesii | 7 | 7 | 8 | fair | poor | no | 25\% Icr, poor trunk taper | remove |
| 51602 | Douglas-fir | Pseudotsuga menziesii | 11 | 11 | 14 | fair | poor | no | 25\% Icr, poor trunk taper | remove |
| 51603 | Douglas-fir | Pseudotsuga menziesii | 19 | 19 | 17 | good | fair | yes | 40\% Icr | remove |
| 51604 | bigleaf maple | Acer macrophyllum | 9 | 9 | 13 | poor | poor | no | suppressed | remove |
| 51605 | bigleaf maple | Acer macrophyllum | 10 | 10 | 15 | poor | poor | no | suppressed | remove |

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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 51608 | bigleaf maple | Acer macrophyllum | 7 | 7 | 9 | very poor | very poor | no | 95\% dead | remove |
| 51609 | Douglas-fir | Pseudotsuga menziesii | 17 | 17 | 12 | good | fair | no | one sided, $50 \%$ Icr, marginal trunk taper | remove |
| 51610 | Douglas-fir | Pseudotsuga menziesii | 12 | 12 | 8 | good | fair | no | one sided, $40 \%$ Icr, marginal trunk taper | remove |
| 51611 | Douglas-fir | Pseudotsuga menziesii | 15 | 15 | 17 | fair | fair | no | 40\% Icr, marginal trunk taper | remove |
| 51612 | Douglas-fir | Pseudotsuga menziesii | 6 | 6 | 0 | very poor | very poor | no | dead | remove |
| 51613 | Douglas-fir | Pseudotsuga menziesii | 21 | 21 | 22 | good | fair | yes | 60\% Icr, one sided | remove |
| 51614 | bigleaf maple | Acer macrophyllum | 8 | 8 | 11 | fair | fair | no | one sided, moderately suppressed, 33\% lcr | remove |
| 51615 | bigleaf maple | Acer macrophyllum | 7 | 7 | 6 | very poor | very poor | no | 90\% dead, suppressed | remove |
| 51616 | bigleaf maple | Acer macrophyllum | 10 | 10 | 16 | good | fair | no | one sided, multiple leaders | remove |
| 51617 | bigleaf maple | Acer macrophyllum | 10 | 10 | 16 | fair | fair | no | multiple leaders | remove |
| 51618 | sweet cherry | Prunus avium | 7,5 | 8 | 12 | poor | poor | no | codominant at ground level, sloughing bark, significant dieback | remove |
| 51619 | bigleaf maple | Acer macrophyllum | 7 | 7 | 9 | fair | fair | no | one sided, overtopped by adjacent trees | remove |
| 51620 | bigleaf maple | Acer macrophyllum | 8 | 8 | 11 | poor | poor | no | suppressed | remove |
| 51621 | Douglas-fir | Pseudotsuga menziesii | 18 | 18 | 15 | fair | fair | no | 35\% lcr, marginal trunk taper | remove |
| 51622 | bigleaf maple | Acer macrophyllum | 8 | 8 | 9 | poor | poor | no | suppressed | remove |
| 51623 | bigleaf maple | Acer macrophyllum | 8 | 8 | 11 | very poor | very poor | no | dead | remove |
| 51624 | bigleaf maple | Acer macrophyllum | 6 | 6 | 4 | very poor | very poor | no | dead | remove |
| 51625 | sweet cherry | Prunus avium | 9 | 9 | 10 | fair | poor | no | poor trunk taper | remove |
| 51626 | Douglas-fir | Pseudotsuga menziesii | 15 | 15 | 15 | good | fair | no | 25\% lcr, marginal trunk taper | remove |
| 51627 | Douglas-fir | Pseudotsuga menziesii | 14 | 14 | 10 | fair | poor | no | 25\% Icr, poor trunk taper | remove |
| 51628 | sweet cherry | Prunus avium | 7 | 7 | 6 | fair | poor | no | codominant at 30', poor trunk taper | remove |
| 51629 | Douglas-fir | Pseudotsuga menziesii | 12 | 12 | 14 | fair | poor | no | 25\% lcr, poor trunk taper | remove |
| 51630 | Douglas-fir | Pseudotsuga menziesii | 13 | 13 | 16 | fair | poor | no | 33\% lcr, poor trunk taper | remove |
| 51631 | bigleaf maple | Acer macrophyllum | 8 | 8 | 8 | poor | poor | no | suppressed | remove |
| 51632 | Douglas-fir | Pseudotsuga menziesii | 15 | 15 | 9 | good | fair | no | 33\% lcr, marginal trunk taper | remove |
| 51633 | Douglas-fir | Pseudotsuga menziesii | 7 | 7 | 6 | poor | poor | no | suppressed, poor trunk taper | remove |
| 51634 | Douglas-fir | Pseudotsuga menziesii | 14 | 14 | 11 | fair | fair | no | 40\% Icr, marginal trunk taper | remove |

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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 51635 | Douglas-fir | Pseudotsuga menziesii | 19 | 19 | 17 | fair | fair | no | one sided, significant ivy on trunk, marginal trunk taper | remove |
| 51636 | bigleaf maple | Acer macrophyllum | 8 | 8 | 12 | poor | poor | no | suppressed, extensive ivy | remove |
| 51637 | bigleaf maple | Acer macrophyllum | 10 | 10 | 15 | fair | fair | no | one sided, multiple leaders, $33 \%$ Icr, marginal trunk taper | remove |
| 51638 | Douglas-fir | Pseudotsuga menziesii | 18 | 18 | 19 | good | fair | no | $60 \%$ Icr, one sided, marginal trunk taper | remove |
| 51639 | bigleaf maple | Acer macrophyllum | 7 | 7 | 14 | fair | poor | no | one sided, overtopped by adjacent trees | remove |
| 51640 | bigleaf maple | Acer macrophyllum | 7 | 7 | 13 | poor | poor | no | one sided, overtopped by adjacent trees, branch dieback | remove |
| 51641 | bigleaf maple | Acer macrophyllum | 9 | 9 | 17 | good | fair | no | one sided, codominant at 20' | remove |
| 51642 | bigleaf maple | Acer macrophyllum | 10 | 10 | 18 | good | fair | no | one sided, multiple leaders | remove |
| 51643 | sweet cherry | Prunus avium | 11 | 11 | 15 | fair | fair | no | 33\% Icr, marginal trunk taper | remove |
| 51644 | Douglas-fir | Pseudotsuga menziesii | 22 | 22 | 18 | good | fair | yes | 50\% Icr, one sided | remove |
| 51645 | Douglas-fir | Pseudotsuga menziesii | 15 | 15 | 14 | fair | poor | no | 50\% Icr, poor trunk taper | remove |
| 51646 | Douglas-fir | Pseudotsuga menziesii | 19 | 19 | 23 | good | fair | yes | one sided, marginal trunk taper | remove |
| 51647 | Douglas-fir | Pseudotsuga menziesii | 24 | 24 | 20 | good | fair | yes | one sided, codominant at 10' | remove |
| 51648 | bigleaf maple | Acer macrophyllum | 10 | 10 | 18 | poor | poor | no | suppressed | remove |
| 51649 | bigleaf maple | Acer macrophyllum | 10 | 10 | 19 | fair | poor | no | significant lean, overtopped by adjacent trees, one sided, significant ivy | remove |
| 51650 | Douglas-fir | Pseudotsuga menziesii | 8 | 8 | 9 | good | fair | no | one sided | remove |
| 51651 | Douglas-fir | Pseudotsuga menziesii | 14 | 14 | 12 | good | fair | no | one sided, marginal trunk taper | remove |
| 51652 | Douglas-fir | Pseudotsuga menziesii | 22 | 22 | 24 | good | fair | yes | one sided | remove |
| 51653 | Douglas-fir | Pseudotsuga menziesii | 17 | 17 | 15 | fair | fair | no | 60\% Icr, marginal trunk taper, one sided | remove |
| 51654 | bigleaf maple | Acer macrophyllum | 8 | 8 | 11 | poor | poor | no | suppressed | remove |
| 51655 | plum | Prunus sp. | 18 | 18 | 19 | fair | fair | no | not maintained for fruit production | remove |
| 51656 | orchard apple | Malus domestica | 9 | 9 | 15 | poor | poor | no | overtopped by adjacent trees | remove |
| 51657 | orchard apple | Malus domestica | 8,8 | 11 | 14 | fair | fair | no | significant ivy, not maintained for fruit production | remove |


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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 51658 | Colorado blue spruce | Picea pungens | 8 | 8 | 7 | poor | poor | no | smothered by ivy | remove |
| 51845 | deodar cedar | Cedrus deodara | 33 | 33 | 27 | good | good | yes |  | remove |
| 51846 | flowering cherry | Prunus serrulata | 24 | 24 | 20 | poor | poor | no | Ganoderma conk at lower trunk, overextended branches | remove |
| 51847 | orchard apple | Malus domestica | 7 | 7 | 10 | fair | fair | no | not maintained for fruit production | remove |
| 51848 | orchard cherry | Prunus avium | 13 | 13 | 14 | poor | poor | no | dieback, not maintained for fruit production | remove |
| 51849 | orchard apple | Malus domestica | 9 | 9 | 15 | fair | poor | no | not maintained for fruit production, extensive lean | remove |
| 51850 | Norway maple | Acer platanoides | 18 | 18 | 20 | poor | poor | no | sloughing bark at lower trunk | remove |
| 51851 | Norway maple | Acer platanoides | 12 | 12 | 16 | good | fair | no | multiple leaders | remove |
| 51852 | deodar cedar | Cedrus deodara | 34 | 34 | 27 | good | fair | yes | multiple leaders | remove |
| 51853 | flowering cherry | Prunus serrulata | 17 | 17 | 16 | fair | fair | no | branch dieback and decay | remove |
| 51854 | flowering cherry | Prunus serrulata | 16 | 16 | 13 | fair | fair | no | multiple heading cuts, branch dieback and decay | remove |
| 51855 | pin oak | Quercus palustris | 20 | 20 | 23 | good | fair | yes | codominant at 25' | remove |
| 51890 | English laurel | Prunus laurocerasus | n/a | n/a | n/a | n/a | n/a | n/a | not a tree species | n/a |
| 51891 | English laurel | Prunus laurocerasus | n/a | n/a | n/a | n/a | n/a | n/a | not a tree species | n/a |
| 51892 | English laurel | Prunus laurocerasus | n/a | n/a | n/a | n/a | n/a | n/a | not a tree species | n/a |
| 51957 | crabapple | Malus sp. | 13 | 13 | 13 | fair | fair | no | large pruning cuts, multiple leaders | remove |
| 51958 | western redcedar | Thuja plicata | 21 | 21 | 18 | good | good | yes |  | remove |
| 51959 | western redcedar | Thuja plicata | 20 | 20 | 14 | good | fair | yes | codominant at 2' | retain |
| 51960 | western redcedar | Thuja plicata | 20 | 20 | 14 | good | good | yes |  | retain |
| 51973 | Douglas-fir | Pseudotsuga menziesii | 60 | 60 | 44 | good | fair | yes | moderately one sided, size estimated, on property line | retain |
| 52002 | Douglas-fir | Pseudotsuga menziesii | 13 | 13 | 14 | good | good | no |  | remove |
| 52042 | Douglas-fir | Pseudotsuga menziesii | 42 | 42 | 31 | good | fair | yes | significant ivy on lower trunk, moderately one sided, moderately thin crown | remove |
| 52064 | plum | Prunus sp. | 11 | 11 | 14 | poor | poor | no | smothered by ivy, significant ivy | remove |
| 52243 | Leyland cypress | Cupressus x leylandii | 12 | 12 | 18 | good | fair | no | one sided, codominant at 4' | retain |

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| Tree No. | Common Name | Scientific Name | DBH ${ }^{1}$ | Single DBH $^{2}$ | C-Rad ${ }^{3}$ | Condition ${ }^{4}$ | Structure | Sig. ${ }^{5}$ | Comments | Treatment |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 52244 | Leyland cypress | Cupressus x leylandii | 12 | 12 | 18 | good | fair | no | one sided | retain |
| 52245 | weeping cherry | Prunus subhirtella | 9 | 9 | 7 | poor | poor | no | headed, decayed branches, significant decay in lower trunk | remove |
| 52246 | weeping cherry | Prunus subhirtella | 11 | 11 | 8 | poor | poor | no | headed, decayed branches, significant decay in lower trunk | remove |
| 52247 | weeping cherry | Prunus subhirtella | 6 | 6 | 6 | fair | fair | no | headed, decayed branches | remove |
| 52248 | flowering cherry | Prunus serrulata | 24 | 24 | 17 | fair | fair | no | several large pruning cuts, decay at lower trunk | remove |
| 52249 | flowering cherry | Prunus serrulata | 26 | 26 | 21 | fair | fair | no | several large pruning cuts, dead 6" diameter branch | remove |
| 52250 | flowering cherry | Prunus serrulata | 27 | 27 | 19 | fair | fair | no | several large pruning cuts | remove |
| 52260 | Douglas-fir | Pseudotsuga menziesii | 10 | 10 | 9 | good | fair | no | moderately one sided | remove |
| 52293 | western redcedar | Thuja plicata | 15 | 15 | 12 | good | good | no |  | remove |
| 52294 | Douglas-fir | Pseudotsuga menziesii | 35 | 35 | 30 | good | good | yes |  | remove |
| 52295 | Douglas-fir | Pseudotsuga menziesii | 12 | 12 | 16 | good | fair | no | heading cuts at lower branches | remove |
| 52296 | sweet cherry | Prunus avium | 6 | 6 | 14 | fair | fair | no | multiple leaders, overgrown rootstock | remove |
| 52344 | Douglas-fir | Pseudotsuga menziesii | 14 | 14 | 10 | fair | poor | no | 50\% lcr, poor trunk taper | remove |
| 52345 | Douglas-fir | Pseudotsuga menziesii | 23 | 23 | 24 | good | fair | yes | one sided | remove |
| 52357 | Douglas-fir | Pseudotsuga menziesii | 34 | 34 | 25 | good | fair | yes | moderately one sided | retain |
| 52428 | sweet cherry | Prunus avium | 6 | 6 | 10 | good | good | no | size estimated | remove |
| 52521 | orchard apple | Malus domestica | 13 | 13 | 18 | fair | fair | no | not maintained for fruit production | remove |
| 52828 | Douglas-fir | Pseudotsuga menziesii | 42 | 42 | 24 | good | fair | yes | trunk crosses property line at ground level, size estimated, one sided, significant ivy on trunk | retain |


| Tree No. | Common Name | Scientific Name | DBH ${ }^{1}$ | Single DBH $^{2}$ | C-Rad ${ }^{3}$ | Condition ${ }^{4}$ | Structure | Sig.? ${ }^{5}$ | Comments | Treatment |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 52928 | Douglas-fir | Pseudotsuga menziesii | 36 | 36 | 20 | fair | fair | no | trunk does not cross property line, size estimated, one sided, significant ivy on trunk | retain |

${ }^{1}$ DBH is the trunk diameter in inches measured per International Society of Arboriculture (ISA) standards.
${ }^{2}$ Single DBH is the trunk diameter of a multi-stem tree converted to a single number according to the following formula: square root of the sum of squared DBH of each stem.

## ${ }^{3}$ C-Rad is the approximate crown radius in feet.

## ${ }^{4}$ Condition and Structure ratings range from very poor, poor, fair, to good.

${ }^{5}$ Significant tree is a tree is determined to be significant by the City Arborist based on its size, health, species, location, proximity to other significant trees, and other characteristics.
Note: Trees are defined by the City as having a minimum 6 inch DBH for Oregon White Oak, Pacific Madrone, and Pacific Dogwood, and 12 inch DBH for all other species.



## Attachment 4 Assumptions and Limiting Conditions

1. Any legal description provided to the consultant is assumed to be correct. The information provided by Growth Commercial Capital and their consultants was the basis of the information provided in this report.
2. It is assumed that this property is not in violation of any codes, statutes, ordinances, or other governmental regulations.
3. The consultant is not responsible for information gathered from others involved in various activities pertaining to this project. Care has been taken to obtain information from reliable sources.
4. Loss or alteration of any part of this delivered report invalidates the entire report.
5. Drawings and information contained in this report may not be to scale and are intended to be used as display points of reference only.
6. The consultant's role is only to make recommendations. Inaction on the part of those receiving the report is not the responsibility of the consultant.
7. The purpose of this report is to provide tree removal, preservation, and protection recommendations in accordance with the City of West Linn Code and Tree Technical Manual.

Real-World Geotechnical Solutions Investigation • Design •Construction Support

December 7, 2018
Project No. 18-5089

Ben Looney<br>Growth Commercial Capitol<br>511 Main Street \#101<br>Oregon City, Oregon 97045<br>Via email: ben@growthcc.com<br>CC: Steve Miller, Emerio Design Via email: stevem@emeriodesign.com

## SUBJECT: GEOTECHNICAL REPORT 23000 \& 23010 BLAND CIRCLE SUBDIVISION T2S R1E SECTION 35B TAX LOTS 201, 400, \& 404 WEST LINN, OREGON

This report presents the results of a geotechnical engineering study conducted by GeoPacific Engineering, Inc. (GeoPacific) for the above-referenced project. The purpose of our investigation was to evaluate subsurface conditions at the site and to provide geotechnical recommendations for site development. This geotechnical study was performed in accordance with GeoPacific Proposal No. P-6777, dated October 31, 2018, and your subsequent authorization of our proposal and General Conditions for Geotechnical Services.

## SITE DESCRIPTION AND PROPOSED DEVELOPMENT

The subject site is located on the north side of Bland Circle in West Linn, Clackamas County, Oregon (Figure 1). The property totals approximately 3.5 acres in size and topography is gently to moderately sloping to the southwest at grades of approximately 5 to 20 percent. The site is currently occupied by two homes. Vegetation consists primarily of short grasses and dense to sparse trees.

It is our understanding that the proposed development includes 18 lots for single family homes, new streets, and associated underground utilities (Figure 2). The southern home will be retained and the northern structure will be removed. A grading plan has not been provided for our review; however, we anticipate maximum cuts and fills will be on the order of 10 feet or less and may incorporate retaining walls.

## REGIONAL AND LOCAL GEOLOGIC SETTING

The subject site lies within the Willamette Valley/Puget Sound lowland, a broad structural depression situated between the Coast Range on the west and the Cascade Range on the east. A series of discontinuous faults subdivide the Willamette Valley into a mosaic of fault-bounded, structural blocks (Yeats et al., 1996). Uplifted structural blocks form bedrock highlands, while down-warped structural blocks form sedimentary basins.

The site is located on a south facing slope at elevations of approximately 530 to 620 feet above sea level. The subject site is underlain by the Miocene aged (about 14.5 to 16.5 million years ago) Columbia River Basalt Formation, which are a thick sequence of lava flows which form the crystalline basement of the Tualatin Valley (Beeson et al., 1989; Gannett and Caldwell, 1998). The basalts are composed of dense, finely crystalline rock that is commonly fractured along blocky and columnar vertical joints. Individual basalt flow units typically range from 25 to 125 feet thick and interflow zones are typically vesicular, scoriaceous, brecciated, and sometimes include sedimentary rocks.

## REGIONAL SEISMIC SETTING

At least three major fault zones capable of generating damaging earthquakes are thought to exist in the vicinity of the subject site. These include the Portland Hills Fault Zone, the Gales Creek-Newberg-Mt. Angel Structural Zone, and the Cascadia Subduction Zone.

## Portland Hills Fault Zone

The Portland Hills Fault Zone is a series of NW-trending faults that include the central Portland Hills Fault, the western Oatfield Fault, and the eastern East Bank Fault. These faults occur in a northwest-trending zone that varies in width between 3.5 and 5.0 miles. The combined three faults vertically displace the Columbia River Basalt by 1,130 feet and appear to control thickness changes in late Pleistocene (approx. 780,000 years) sediment (Madin, 1990). The Portland Hills Fault occurs along the Willamette River at the base of the Portland Hills, and is approximately 4.6 miles northeast of the site. The East Bank Fault is oriented roughly parallel to the Portland Hills Fault, on the east bank of the Willamette River, and is located approximately 8.6 miles northwest of the site. The Oatfield Fault occurs along the western side of the Portland Hills, and is approximately 3.8 miles northeast of the site. The Oatfield Fault is considered to be potentially seismogenic (Wong, et al., 2000). Madin and Mabey (1996) indicate the Portland Hills Fault Zone has experienced Late Quaternary (last 780,000 years) fault movement; however, movement has not been detected in the last 20,000 years. The accuracy of the fault mapping is stated to be within 500 meters (Wong, et al., 2000). No historical seismicity is correlated with the mapped portion of the Portland Hills Fault Zone, but in 1991 a M3.5 earthquake occurred on a NWtrending shear plane located 1.3 miles east of the fault (Yelin, 1992). Although there is no definitive evidence of recent activity, the Portland Hills Fault Zone is assumed to be potentially active (Geomatrix Consultants, 1995).

## Gales Creek-Newberg-Mt. Angel Structural Zone

The Gales Creek-Newberg-Mt. Angel Structural Zone is a 50 -mile-long zone of discontinuous, NW-trending faults that lies approximately 15.6 miles southwest of the subject site. These faults are recognized in the subsurface by vertical separation of the Columbia River Basalt and offset seismic reflectors in the overlying basin sediment (Yeats et al., 1996; Werner et al., 1992). A geologic reconnaissance and photogeologic analysis study conducted for the Scoggins Dam site in the Tualatin Basin revealed no evidence of deformed geomorphic surfaces along the structural zone (Unruh et al., 1994). No seismicity has been recorded on the Gales Creek Fault or Newberg Fault (the fault closest to the subject site); however, these faults are considered to be potentially active because they may connect with the seismically active Mount Angel Fault and the rupture plane of the 1993 M5.6 Scotts Mills earthquake (Werner et al. 1992; Geomatrix Consultants, 1995).

## Cascadia Subduction Zone

The Cascadia Subduction Zone is a 680-mile-long zone of active tectonic convergence where oceanic crust of the Juan de Fuca Plate is subducting beneath the North American continent at a rate of 4 cm per year (Goldfinger et al., 1996). A growing body of geologic evidence suggests that prehistoric subduction zone earthquakes have occurred (Atwater, 1992; Carver, 1992; Peterson et al., 1993; Geomatrix Consultants, 1995). This evidence includes: (1) buried tidal marshes recording episodic, sudden subsidence along the coast of northern California, Oregon, and Washington, (2) burial of subsided tidal marshes by tsunami wave deposits, (3) paleoliquefaction features, and (4) geodetic uplift patterns on the Oregon coast. Radiocarbon dates on buried tidal marshes indicate a recurrence interval for major subduction zone earthquakes of 250 to 650 years with the last event occurring 300 years ago (Atwater, 1992; Carver, 1992; Peterson et al., 1993; Geomatrix Consultants, 1995). The inferred seismogenic portion of the plate interface lies roughly along the Oregon coast at depths of between 20 and 40 miles.

## SUBSURFACE CONDITIONS

Our site-specific exploration for this report was conducted on November 19, 2018. A total of 4 exploratory test pits were excavated with a small to medium sized trackhoe to depths of 5.5 to 8 feet at the approximate locations indicated on Figure 2. It should be noted that test pit locations were located in the field by pacing or taping distances from apparent property corners and other site features shown on the plans provided. As such, the locations of the explorations should be considered approximate.

A GeoPacific Engineering Geologist continuously monitored the field exploration program and logged the test pits. Soils observed in the explorations were classified in general accordance with the Unified Soil Classification System (USCS). Rock hardness was classified in accordance with Table 1, modified from the ODOT Rock Hardness Classification Chart. During exploration, our geologist also noted geotechnical conditions such as soil consistency, moisture and groundwater conditions. Logs of test pits are attached to this report. The following report sections are based on the exploration program and summarize subsurface conditions encountered at the site.

Table 1. Rock Hardness Classification Chart

| ODOT Rock Hardness Rating | Field Criteria | Unconfined Compressive Strength | Typical Equipment Needed For Excavation |
| :---: | :---: | :---: | :---: |
| Extremely Soft (RO) | Indented by thumbnail | <100 psi | Small excavator |
| Very Soft (R1) | Scratched by thumbnail, crumbled by rock hammer | 100-1,000 psi | Small excavator |
| Soft (R2) | Not scratched by thumbnail, indented by rock hammer | 1,000-4,000 psi | Medium excavator <br> (slow digging with small excavator) |
| Medium Hard (R3) | Scratched or fractured by rock hammer | 4,000-8,000 psi | Medium to large excavator (slow to very slow digging), typically requires chipping with hydraulic hammer or mass excavation) |
| Hard (R4) | Scratched or fractured w/ difficulty | 8,000-16,000 psi | Slow chipping with hydraulic hammer and/or blasting |
| Very Hard (R5) | Not scratched or fractured after many blows, hammer rebounds | >16,000 psi | Blasting |

Undocumented Fill: Undocumented fill was not encountered in our explorations. Our reconnaissance indicates that approximately 5 feet of undocumented fill may be present in the vicinity of the existing driveway of the home at 23010 Bland Circle, as indicated on Figure 2. We anticipate other areas of fill may be present in the vicinity of the existing homes.

Topsoil Horizon: Directly underlying the ground surface in test pits TP-1 through TP-4 was a topsoil horizon consisting of light brown, moderately to highly organic silt (OL-ML). The topsoil horizon was generally loose, contained many fine roots, and extended to a depth of 9 to 12 inches.

Residual Soil: Underlying the topsoil horizon in test pits TP-1 through TP-4 was clayey silt (ML) to silty clay (CL) residual soil resulting from in-place weathering of the underlying Columbia River Basalt Formation. The light reddish brown silty clay to clayey silt contained trace weathered basalt fragments and was generally characterized by a very stiff consistency. In test pits TP-1 through TP-3, the residual soil extended to a depth of 2.5 to 6.5 feet and beyond the maximum depth of exploration in test pit TP-4.

Columbia River Basalt Formation: Underlying the residual soil in test pits TP-1 through TP-3 was weathered basalt belonging to the Columbia River Basalt Formation. Generally, the gray basalt was extremely soft (R0) to soft (R2) with trace light reddish brown silty clay to clayey silt matrix. Practical refusal was encountered on soft (R2) to medium hard (R3) basalt at a depth of 5.5 to 8 feet in test pits TP-1 through TP-3. A larger machine would likely be able to excavate
deeper depths. Table 2 presents the depths at which rock was first encountered in test pits and the depth at which practical refusal was achieved with a small to medium sized trackhoe equipped with rock teeth.

Table 2. Depth of Basalt Bedrock Encountered in Explorations

| Test Pit | Depth Rock First <br> Encountered | Depth of Practical Refusal on <br> Medium Hard (R3) Basalt |
| :---: | :---: | :---: |
| TP-1 | $2.5^{\prime}$ | $5.5^{\prime}$ |
| TP-2 | $6.5^{\prime}$ | $8^{\prime}$ |
| TP-3 | $5.5^{\prime}$ | $6^{\prime}$ |

## Soil Moisture and Groundwater

On November 19, 2018, neither static groundwater nor groundwater seepage was encountered in test pits excavated to a maximum depth of 8 feet below the ground surface. Regional groundwater mapping indicates that static groundwater is present at a depth of approximately 220 to 280 feet below the ground surface (Snyder, 2008). Experience has shown that temporary storm related perched groundwater within the near surface soils often occur over fine-grained native deposits such as those beneath the site during the wet season and particularly in mottled soils such as were identified in the test pits. It is anticipated that groundwater conditions will vary depending on the season, local subsurface conditions, changes in site utilization, and other factors.

## INFILTRATION TESTING

Infiltration testing was not performed due to encountering basalt bedrock. GeoPacific does not recommend infiltrating into bedrock due to limited storage volume.

## CONCLUSIONS AND RECOMMENDATIONS

Our investigation indicates that the proposed development is geotechnically feasible, provided that the recommendations of this report are incorporated into the design and sufficient geotechnical monitoring is incorporated into the construction phases of the project. In our opinion, the greatest geotechnical issue for project completion is the depth of the bedrock beneath the site. Weathered basalt bedrock was encountered throughout the site and basalt was first encountered at depths of 2.5 to 6.5 feet. Practical refusal was encountered on medium hard (R3) basalt in test pits TP-1 through TP-3 at depths of 5.5 to 8 feet. A larger excavator may be able to achieve greater depths; however, difficult excavating conditions should be expected.

## Site Preparation

Areas of proposed buildings, new streets, and areas to receive fill should be cleared of vegetation and any organic and inorganic debris. Existing buried structures, should be demolished and any cavities structurally backfilled. Inorganic debris and organic materials from clearing should be removed from the site. Existing fill and any organic-rich topsoil should then be stripped from construction areas of the site or where engineered fill is to be placed. Fill was not encountered in our explorations; however, our reconnaissance indicates that fill is likely present in the vicinity of the existing driveway of the southern home as indicated on Figure 2. Other areas of fill are likely present in the vicinity of the existing homes.

Organic-rich topsoil should then be stripped from native soil areas of the site. The estimated depth range necessary for removal of topsoil in cut and fill areas is approximately 6 to 9 inches, respectively. The final depth of soil removal will be determined on the basis of a site inspection after the stripping/excavation has been performed. Stripped topsoil should preferably be removed from the site due to the high density of the proposed development. Any remaining topsoil should be stockpiled only in designated areas and stripping operations should be observed and documented by the geotechnical engineer or his representative.

Any remaining undocumented fills and subsurface structures (tile drains, basements, driveway and landscaping fill, old utility lines, septic leach fields, etc.) should be removed and the excavations backfilled with engineered fill.

Once stripping of a particular area is approved, the area must be ripped or tilled to a depth of 12 inches, moisture conditioned, root-picked, and compacted in-place prior to the placement of engineered fill or crushed aggregate base for pavement. Exposed subgrade soils should be evaluated by the geotechnical engineer. For large areas, this evaluation is normally performed by proof-rolling the exposed subgrade with a fully loaded scraper or dump truck. For smaller areas where access is restricted, the subgrade should be evaluated by probing the soil with a steel probe. Soft/loose soils identified during subgrade preparation should be compacted to a firm and unyielding condition, over-excavated and replaced with engineered fill (as described below), or stabilized with rock prior to placement of engineered fill. The depth of overexcavation, if required, should be evaluated by the geotechnical engineer at the time of construction.

## Engineered Fill

All grading for the proposed development should be performed as engineered grading in accordance with the applicable building code at time of construction with the exceptions and additions noted herein. Proper test frequency and earthwork documentation usually requires daily observation and testing during stripping, rough grading, and placement of engineered fill. Imported fill material must be approved by the geotechnical engineer prior to being imported to the site. Oversize material greater than 6 inches in size should not be used within 3 feet of foundation footings, and material greater than 12 inches in diameter should not be used in engineered fill.

Engineered fill should be compacted in horizontal lifts not exceeding 8 inches using standard compaction equipment. We recommend that engineered fill be compacted to at least $95 \%$ of the maximum dry density determined by ASTM D698 (Standard Proctor) or equivalent. Field density testing should conform to ASTM D2922 and D3017, or D1556. All engineered fill should be observed and tested by the project geotechnical engineer or his representative. Typically,
one density test is performed for at least every 2 vertical feet of fill placed or every $500 \mathrm{yd}^{3}$, whichever requires more testing. Because testing is performed on an on-call basis, we recommend that the earthwork contractor be held contractually responsible for test scheduling and frequency.

Site earthwork will be impacted by soil moisture and shallow groundwater conditions. Earthwork in wet weather would likely require extensive use of cement or lime treatment, or other special measures, at a considerable additional cost compared to earthwork performed under dryweather conditions.

## Keyways and Benching For Engineered Fill on Slopes

Engineered fill to be placed in sloping areas inclining steeper than $20 \%$ grade should be constructed on a keyway and benches in accordance with the typical design shown in Figure 3. Keyways should have a minimum depth of 2 feet and minimum width of 10 feet. Additional removals of potentially unstable soils may be required depending on conditions observed during construction. Both benches and keyways should be roughly horizontal in the down slope direction, but may slope up to $20 \%$ grade along topographic contour. Keyways sloping more than $20 \%$ grade along topographic contour should be benched.

The keyway should include a subdrain consisting of a minimum 3-inch diameter, ADS Heavy Duty grade (or equivalent), perforated plastic pipe enveloped in a minimum of 3 cubic feet per lineal foot of 2 " $-1 / 2$ ", open-graded gravel drain rock wrapped with geotextile filter fabric (Mirafi 140 N or equivalent). GeoPacific should inspect keyways, subdrains and benching prior to fill placement. Areas of potential seepage observed during construction may require a rock blanket drain in the keyway bottom.

We recommend that permanent fill and cut slopes be constructed no steeper than 2H:1V (50\% grade). Fill slopes should be overbuilt a minimum of 3 feet horizontally beyond finish grade and then trimmed back to finish grade as shown on Figure 3 in order to achieve a well compacted slope face.

## Excavating Conditions and Utility Trenches

We anticipate that on-site soils can be excavated using conventional heavy equipment such as scrapers and trackhoes. Weathered basalt bedrock was encountered in test pits throughout the site at depths of 2.5 to 6.5 feet and practical refusal was encountered on medium hard (R3) basalt at depths of 5.5 to 8 feet in test pits TP-1 through TP-3. A larger excavator may be able to achieve greater depths; however, difficult excavating conditions should be expected.

All temporary cuts in excess of 4 feet in height should be sloped in accordance with U.S. Occupational Safety and Health Administration (OSHA) regulations (29 CFR Part 1926), or be shored. The existing native soil is classified as Type B Soil and temporary excavation side slope inclinations as steep as $1 \mathrm{H}: 1 \mathrm{~V}$ may be assumed for planning purposes. This cut slope inclination is applicable to excavations above groundwater seepage zones only. Maintenance of safe working conditions, including temporary excavation stability, is the responsibility of the contractor. Actual slope inclinations at the time of construction should be determined based on safety requirements and actual soil and groundwater conditions.

Saturated soils and groundwater may be encountered in utility trenches, particularly during the wet season. We anticipate that dewatering systems consisting of ditches, sumps and pumps
would be adequate for control of perched groundwater. Regardless of the dewatering system used, it should be installed and operated such that in-place soils are prevented from being removed along with the groundwater.

Vibrations created by traffic and construction equipment may cause some caving and raveling of excavation walls. In such an event, lateral support for the excavation walls should be provided by the contractor to prevent loss of ground support and possible distress to existing or previously constructed structural improvements.

PVC pipe should be installed in accordance with the procedures specified in ASTM D2321. We recommend that trench backfill be compacted to at least $95 \%$ of the maximum dry density obtained by Modified Proctor ASTM D1557 or equivalent. Initial backfill lift thickness for a $3 / 4 \mathrm{~m}-0$ crushed aggregate base may need to be as great as 4 feet to reduce the risk of flattening underlying flexible pipe. Subsequent lift thickness should not exceed 1 foot. If imported granular fill material is used, then the lifts for large vibrating plate-compaction equipment (e.g. hoe compactor attachments) may be up to 2 feet, provided that proper compaction is being achieved and each lift is tested. Use of large vibrating compaction equipment should be carefully monitored near existing structures and improvements due to the potential for vibrationinduced damage.

Adequate density testing should be performed during construction to verify that the recommended relative compaction is achieved. Typically, one density test is taken for every 4 vertical feet of backfill on each 200-lineal-foot section of trench.

## Erosion Control Considerations

During our field exploration program, we did not observe soil types that would be considered highly susceptible to erosion except in areas of moderately sloping topography. In our opinion, the primary concern regarding erosion potential will occur during construction, in areas that have been stripped of vegetation. Erosion at the site during construction can be minimized by implementing the project erosion control plan, which should include judicious use of straw wattles and silt fences. If used, these erosion control devices should be in place and remain in place throughout site preparation and construction.

Erosion and sedimentation of exposed soils can also be minimized by quickly re-vegetating exposed areas of soil, and by staging construction such that large areas of the project site are not denuded and exposed at the same time. Areas of exposed soil requiring immediate and/or temporary protection against exposure should be covered with either mulch or erosion control netting/blankets. Areas of exposed soil requiring permanent stabilization should be seeded with an approved grass seed mixture, or hydroseeded with an approved seed-mulch-fertilizer mixture.

## Wet Weather Earthwork

Soils underlying the site are likely to be moisture sensitive and may be difficult to handle or traverse with construction equipment during periods of wet weather. Earthwork is typically most economical when performed under dry weather conditions. Earthwork performed during the wet-weather season will probably require expensive measures such as cement treatment or imported granular material to compact fill to the recommended engineering specifications. If earthwork is to be performed or fill is to be placed in wet weather or under wet conditions when
soil moisture content is difficult to control, the following recommendations should be incorporated into the contract specifications:
> Earthwork should be performed in small areas to minimize exposure to wet weather. Excavation or the removal of unsuitable soils should be followed promptly by the placement and compaction of clean engineered fill. The size and type of construction equipment used may have to be limited to prevent soil disturbance. Under some circumstances, it may be necessary to excavate soils with a backhoe to minimize subgrade disturbance caused by equipment traffic;
$>$ The ground surface within the construction area should be graded to promote run-off of surface water and to prevent the ponding of water;
> Material used as engineered fill should consist of clean, granular soil containing less than 5 percent fines. The fines should be non-plastic. Alternatively, cement treatment of on-site soils may be performed to facilitate wet weather placement;
> The ground surface within the construction area should be sealed by a smooth drum vibratory roller, or equivalent, and under no circumstances should be left uncompacted and exposed to moisture. Soils which become too wet for compaction should be removed and replaced with clean granular materials;
$>$ Excavation and placement of fill should be observed by the geotechnical engineer to verify that all unsuitable materials are removed and suitable compaction and site drainage is achieved; and
> Geotextile silt fences, straw wattles, and fiber rolls should be strategically located to control erosion.

If cement or lime treatment is used to facilitate wet weather construction, GeoPacific should be contacted to provide additional recommendations and field monitoring.

## Pavement Design

For design purposes, we used an estimated resilient modulus of 9,000 for compacted native soil. Table 3 presents our recommended minimum pavement section for dry weather construction.

Table 3. Recommended Minimum Dry-Weather Pavement Section

| Material Layer | Light-duty <br> Public Streets | Private <br> Driveways | Compaction Standard |
| :---: | :---: | :---: | :---: |
| Asphaltic Concrete (AC) | 3 in. | 2.5 in. | $92 \%$ of Rice Density AASHTO |
| Crushed Aggregate Base $3 / 4 "-$ <br> 0 (leveling course) | 2 in. | 2 in. | $95 \%$ of Modified Proctor <br> AASHTO T-180 |
| Crushed Aggregate Base <br> $11 / 2^{\prime \prime}-0$ | $8 \mathrm{in}$. | 6 in. | $95 \%$ of Modified Proctor <br> AASHTO T-180 |
| Subgrade | $12 \mathrm{in}$. | $12 \mathrm{in}$. | $95 \%$ of Standard Proctor <br> AASHTO T-99 or equivalent |

Any pockets of organic debris or loose fill encountered during ripping or tilling should be removed and replaced with engineered fill (see Site Preparation Section). In order to verify subgrade strength, we recommend proof-rolling directly on subgrade with a loaded dump truck during dry weather and on top of base course in wet weather. Soft areas that pump, rut, or weave should be stabilized prior to paving. If pavement areas are to be constructed during wet weather, the subgrade and construction plan should be reviewed by the project geotechnical engineer at the time of construction so that condition-specific recommendations can be provided. The moisture sensitive subgrade soils make the site a difficult wet weather construction project.

During placement of pavement section materials, density testing should be performed to verify compliance with project specifications. Generally, one subgrade, one base course, and one asphalt compaction test is performed for every 100 to 200 linear feet of paving.

## Spread Foundations

The proposed residential structures may be supported on shallow foundations bearing on competent undisturbed, native soils and/or engineered fill, appropriately designed and constructed as recommended in this report. Foundation design, construction, and setback requirements should conform to the applicable building code at the time of construction. For maximization of bearing strength and protection against frost heave, spread footings should be embedded at a minimum depth of 12 inches below exterior grade. The recommended minimum widths for continuous footings supporting wood-framed walls without masonry are 12 inches for single-story, 15 inches for two-story, and 18 inches for three-story structures. Minimum foundation reinforcement should consist of a No. 4 bar at the tops of stem walls, and a No. 4 bar at the bottom of footings. Concrete slab-on-grade reinforcement should consist of No. 4 bars placed on 24 -inch centers in a grid pattern.

The anticipated allowable soil bearing pressure is $1,500 \mathrm{lbs} / \mathrm{ft}^{2}$ for footings bearing on competent, native soil and/or engineered fill. A maximum chimney and column load of 30 kips is recommended for the site. The recommended maximum allowable bearing pressure may be increased by $1 / 3$ for short-term transient conditions such as wind and seismic loading. For heavier loads, the geotechnical engineer should be consulted. The coefficient of friction between on-site soil and poured-in-place concrete may be taken as 0.40 , which includes no factor of safety. The maximum anticipated total and differential footing movements (generally from soil expansion and/or settlement) are 1 inch and $3 / 4$ inch over a span of 20 feet, respectively. We anticipate that the majority of the estimated settlement will occur during construction, as loads are applied. Excavations near structural footings should not extend within a $1 \mathrm{H}: 1 \mathrm{~V}$ plane projected downward from the bottom edge of footings.

Footing excavations should penetrate through topsoil and any loose soil to competent subgrade that is suitable for bearing support. All footing excavations should be trimmed neat, and all loose or softened soil should be removed from the excavation bottom prior to placing reinforcing steel bars. Due to the moisture sensitivity of on-site native soils, foundations constructed during the wet weather season may require overexcavation of footings and backfill with compacted, crushed aggregate.

Our recommendations are for house construction incorporating raised wood floors and conventional spread footing foundations. If living space of the structures will incorporate basements, a geotechnical engineer should be consulted to make additional recommendations for retaining walls, water-proofing, underslab drainage and wall subdrains. After site
development, a Final Soil Engineer's Report should either confirm or modify the above recommendations.

## Permanent Below-Grade Walls

Lateral earth pressures against below-grade retaining walls will depend upon the inclination of any adjacent slopes, type of backfill, degree of wall restraint, method of backfill placement, degree of backfill compaction, drainage provisions, and magnitude and location of any adjacent surcharge loads. At-rest soil pressure is exerted on a retaining wall when it is restrained against rotation. In contrast, active soil pressure will be exerted on a wall if its top is allowed to rotate or yield a distance of roughly 0.001 times its height or greater.

If the subject retaining walls will be free to rotate at the top, they should be designed for an active earth pressure equivalent to that generated by a fluid weighing 35 pcf for level backfill against the wall. For restrained wall, an at-rest equivalent fluid pressure of 55 pcf should be used in design, again assuming level backfill against the wall. These values assume that drainage provisions are incorporated, free draining gravel backfill is used, and hydrostatic pressures are not allowed to develop against the wall.

During a seismic event, lateral earth pressures acting on below-grade structural walls will increase by an incremental amount that corresponds to the earthquake loading. Based on the Mononobe-Okabe equation and peak horizontal accelerations appropriate for the site location, seismic loading should be modeled using the active or at-rest earth pressures recommended above, plus an incremental rectangular-shaped seismic load of magnitude 6.5 H , where H is the total height of the wall.

We assume relatively level ground surface below the base of the walls. As such, we recommend passive earth pressure of 320 pcf for use in design, assuming wall footings are cast against competent native soils or engineered fill. If the ground surface slopes down and away from the base of any of the walls, a lower passive earth pressure should be used and GeoPacific should be contacted for additional recommendations.

A coefficient of friction of 0.42 may be assumed along the interface between the base of the wall footing and subgrade soils. The recommended coefficient of friction and passive earth pressure values do not include a safety factor, and an appropriate safety factor should be included in design. The upper 12 inches of soil should be neglected in passive pressure computations unless it is protected by pavement or slabs on grade.

The above recommendations for lateral earth pressures assume that the backfill behind the subsurface walls will consist of properly compacted structural fill, and no adjacent surcharge loading. If the walls will be subjected to the influence of surcharge loading within a horizontal distance equal to or less than the height of the wall, the walls should be designed for the additional horizontal pressure. For uniform surcharge pressures, a uniformly distributed lateral pressure of 0.3 times the surcharge pressure should be added. Traffic surcharges may be estimated using an additional vertical load of 250 psf (2 feet of additional fill), in accordance with local practice.

The recommended equivalent fluid densities assume a free-draining condition behind the walls so that hydrostatic pressures do not build-up. This can be accomplished by placing a 12 to 18 inch wide zone of sand and gravel containing less than 5 percent passing the No. 200 sieve against the walls. A 3-inch minimum diameter perforated, plastic drain pipe should be installed
at the base of the walls and connected to a suitable discharge point to remove water in this zone of sand and gravel. The drain pipe should be wrapped in filter fabric (Mirafi 140N or other as approved by the geotechnical engineer) to minimize clogging.

Wall drains are recommended to prevent detrimental effects of surface water runoff on foundations - not to dewater groundwater. Drains should not be expected to eliminate all potential sources of water entering a basement or beneath a slab-on-grade. An adequate grade to a low point outlet drain in the crawlspace is required by code. Underslab drains are sometimes added beneath the slab when placed over soils of low permeability and shallow, perched groundwater.

Water collected from the wall drains should be directed into the local storm drain system or other suitable outlet. A minimum 0.5 percent fall should be maintained throughout the drain and non-perforated pipe outlet. Down spouts and roof drains should not be connected to the wall drains in order to reduce the potential for clogging. The drains should include clean-outs to allow periodic maintenance and inspection. Grades around the proposed structure should be sloped such that surface water drains away from the building.

GeoPacific should be contacted during construction to verify subgrade strength in wall keyway excavations, to verify that backslope soils are in accordance with our assumptions, and to take density tests on the wall backfill materials.

Structures should be located a horizontal distance of at least 1.5 H away from the back of the retaining wall, where H is the total height of the wall. GeoPacific should be contacted for additional foundation recommendations where structures are located closer than 1.5 H to the top of any wall.

## Seismic Design

The Oregon Department of Geology and Mineral Industries (Dogami), Oregon HazVu: 2018 Statewide GeoHazards Viewer indicates that the site is in an area where very strong ground shaking is anticipated during an earthquake. Structures should be designed to resist earthquake loading in accordance with the methodology described in the 2015 International Building Code (IBC) with applicable Oregon Structural Specialty Code (OSSC) revisions (current 2014). We recommend Site Class C be used for design per the OSSC, Table 1613.5.2 and as defined in ASCE 7, Chapter 20, Table 20.3-1. Design values determined for the site using the USGS (United States Geological Survey) 2016 Seismic Design Maps Summary Report are summarized in Table 4, presented on the following page, and are based upon existing soil conditions.

Table 4. Recommended Earthquake Ground Motion Parameters (2010 ASCE-7)

| Parameter | Value |
| :--- | :---: |
| Location (Lat, Long), degrees |  |
| Mapped Spectral Acceleration Values (MCE): |  |
| Peak Ground Acceleration PGA |  |
| Short Period, $\mathrm{S}_{\mathrm{s}}$ | 0.414 |
| 1.0 Sec Period, $\mathrm{S}_{1}$ | 0.951 g |
|  |  |
| Soil Factors for Site Class D: | 0.409 g |
| $\mathrm{~F}_{\mathrm{a}}$ | 1.019 |
| $\mathrm{~F}_{\mathrm{v}}$ | 1.391 |
| Residential Site Value $=2 / 3 \times \mathrm{F}_{\mathrm{a}} \times \mathrm{S}_{\mathrm{s}}$ | 0.647 g |
| Residential Seismic Design Category | C |

Soil liquefaction is a phenomenon wherein saturated soil deposits temporarily lose strength and behave as a liquid in response to earthquake shaking. Soil liquefaction is generally limited to loose, granular soils located below the water table. According to the Oregon HazVu: Statewide Geohazards Viewer, the subject site is regionally characterized as having no risk of soil liquefaction (DOGAMI:HazVu, 2018).

## Footing and Roof Drains

Construction should include typical measures for controlling subsurface water beneath the homes, including positive crawlspace drainage to an adequate low-point drain exiting the foundation, visqueen covering the exposed ground in the crawlspace, and crawlspace ventilation (foundation vents). The homebuyers should be informed and educated that some slow flowing water in the crawlspaces is considered normal and not necessarily detrimental to the home given these other design elements incorporated into its construction. Appropriate design professionals should be consulted regarding crawlspace ventilation, building material selection and mold prevention issues, which are outside GeoPacific's area of expertise.

Down spouts and roof drains should collect roof water in a system separate from the footing drains to reduce the potential for clogging. Roof drain water should be directed to an appropriate discharge point and storm system well away from structural foundations. Grades should be sloped downward and away from buildings to reduce the potential for ponded water near structures.

If the proposed structures will have a raised floor, and no concrete slab-on-grade floors in living spaces are used, perimeter footing drains would not be required based on soil conditions encountered at the site and experience with standard local construction practices. Where it is desired to reduce the potential for moist crawl spaces, footing drains may be installed. If concrete slab-on-grade floors are used, perimeter footing drains should be installed as recommended below.

Where necessary, perimeter footing drains should consist of 3 or 4-inch diameter, perforated plastic pipe embedded in a minimum of $1 \mathrm{ft}^{3}$ per lineal foot of clean, free-draining drain rock. The drain pipe and surrounding drain rock should be wrapped in non-woven geotextile (Mirafi 140 N , or approved equivalent) to minimize the potential for clogging and/or ground loss due to piping. A minimum 0.5 percent fall should be maintained throughout the drain and non-
perforated pipe outlet. In our opinion, footing drains may outlet at the curb, or on the back sides of lots where sufficient fall is not available to allow drainage to meet the street.

## UNCERTAINTIES AND LIMITATIONS

We have prepared this report for the owner and their consultants for use in design of this project only. This report should be provided in its entirety to prospective contractors for bidding and estimating purposes; however, the conclusions and interpretations presented in this report should not be construed as a warranty of the subsurface conditions. Experience has shown that soil and groundwater conditions can vary significantly over small distances. Inconsistent conditions can occur between explorations that may not be detected by a geotechnical study. If, during future site operations, subsurface conditions are encountered which vary appreciably from those described herein, GeoPacific should be notified for review of the recommendations of this report, and revision of such if necessary.

Sufficient geotechnical monitoring, testing and consultation should be provided during construction to confirm that the conditions encountered are consistent with those indicated by explorations. The checklist attached to this report outlines recommended geotechnical observations and testing for the project. Recommendations for design changes will be provided should conditions revealed during construction differ from those anticipated, and to verify that the geotechnical aspects of construction comply with the contract plans and specifications.

Within the limitations of scope, schedule and budget, GeoPacific attempted to execute these services in accordance with generally accepted professional principles and practices in the fields of geotechnical engineering and engineering geology at the time the report was prepared. No warranty, expressed or implied, is made. The scope of our work did not include environmental assessments or evaluations regarding the presence or absence of wetlands or hazardous or toxic substances in the soil, surface water, or groundwater at this site.

We appreciate this opportunity to be of service.
Sincerely,
GeoPacific Engineering, Inc.


Beth K. Rapp, C.E.G.
Senior Engineering Geologist


James D. Imbrie, P.E., G.E. Principal Geotechnical Engineer

## Attachments: References <br> Checklist of Recommended Geotechnical Testing and Observation

Figure 1 - Vicinity Map
Figure 2 - Site and Exploration Plan
Figure 3 - Fill Slope Detail
Test Pit Logs (TP-1 - TP-4)

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## Checklist of Recommended Geotechnical Testing and Observation

| Item <br> No. | Procedure | Timing | By Whom | Done |
| :---: | :---: | :---: | :---: | :---: |
| 1 | Preconstruction meeting | Prior to beginning <br> site work | Contractor, Developer, <br> Civil and Geotechnical <br> Engineers |  |
| 2 | Fill removal from site or <br> sorting and stockpiling | Prior to mass <br> stripping | Soil Technician/ <br> Geotechnical Engineer |  |
| 3 | Stripping, aeration, and <br> root-picking operations | During stripping | Soil Technician |  |
| 4 | Compaction testing of <br> engineered fill (90\% of <br> Modified Proctor) | During filling, tested <br> every 2 vertical feet | Soil Technician |  |
| 5 | Compaction testing of <br> trench backfill (95\% of <br> Standard Proctor) | During backfilling, <br> tested every 4 <br> vertical feet for every <br> 200 lineal feet | Soil Technician |  |
| 7 | Street Subgrade <br> Compaction (95\% of <br> Standard Proctor) | Prior to placing base <br> course | Soil Technician |  |
| 8 | Base course compaction <br> (95\% of Modified Proctor) | Prior to paving, <br> tested every 200 <br> lineal feet | Soil Technician |  |
| 9 | AC Compaction <br> (92\% (bottom lift) / 92\% <br> (top lift) of Rice) | During paving, tested <br> every 200 lineal feet | Soil Technician |  |
| Final Geotechnical <br> Engineer's Report | Completion of project <br> Ceotechnical Engineer |  |  |  |
| 1 |  |  |  |  |

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## VICINITY MAP




| $2.5^{\prime}$ |
| :--- |
| $5.5^{\prime}$ |

2.5' = Depth at Which Rock is First Encountered
5.5' $=$ Depth of Practical Refusal on Rock
$>10^{\prime}=$ Depth of Practical Refusal Exceeds Depth of Exploration


## TYPICAL KEYWAY, BENCHING \& FILL SLOPE DETAIL



Recommended subdrain is minimum 3-inch-diameter ADS Heavy Duty grade (or equivalent), perforated plastic pipe enveloped in a minimum of 3 cubic feet per lineal foot of 2 " to $1 / 2^{\prime \prime}$ open-graded gravel drain rock wrapped with geotextile filter fabric (Mirafi 140N or equivalent).





## BLAND CIRCLE SUBDIVISION

15 LOT SUBDIVISION
NW 1/4 SECTION 35, T. 2S, R. 1E, W.M.
CITY OF WEST LINN, OREGON






| Treen. | Common Name | Ssienticic Mame | OB4' $^{1}$ |  |  | ${ }^{\text {ara }}{ }^{\text {a }}$ Condition ${ }^{4}$ | stutatue | $\operatorname{six}_{6}$ ? | Commens | Treament |
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SECTION A-A: 28' LOCAL ROAD W/ DETACHED SIDEWALKS (LEFT \& RIGHT) - TYPICAL SECTION






[^0]:    ${ }^{1}$ Live crown ratio is the ratio of the height of the live crown of a tree to the total height of the tree. Generally, the higher the live crown ratio, the better the structural stability of a tree.
    ${ }^{2}$ Height to diameter ratio is the ratio of the height of a tree to the diameter of the trunk. Generally, the lower the height to diameter ratio, the better the structural stability of a tree.

